



# NASA PATENT ABSTRACTS BIBLIOGRAPHY

## A CONTINUING BIBLIOGRAPHY

### Section 2 • Indexes

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## ACCESSION NUMBER RANGES

<i>Bibliography Number</i>	<i>STAR Accession Numbers</i>
NASA SP-7039(04) SEC 1	N69-20701 – N73-33931
NASA SP-7039(12) SEC 1	N74-10001 – N77-34042
NASA SP-7039(13) SEC 1	N78-10001 – N78-22018
NASA SP-7039(14) SEC 1	N78-22019 – N78-34034
NASA SP-7039(15) SEC 1	N79-10001 – N79-21993
NASA SP-7039(16) SEC 1	N79-21994 – N79-34158
NASA SP-7039(17) SEC 1	N80-10001 – N80-22254
NASA SP-7039(18) SEC 1	N80-22255 – N80-34339
NASA SP-7039(19) SEC 1	N81-10001 – N81-21997
NASA SP-7039(20) SEC 1	N81-21998 – N81-34139
NASA SP-7039(21) SEC 1	N82-10001 – N82-22140
NASA SP-7039(22) SEC 1	N82-22141 – N82-34341
NASA SP-7039(23) SEC 1	N83-10001 – N83-23266
NASA SP-7039(24) SEC 1	N83-23267 – N83-37053
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**NASA**

**PATENT  
ABSTRACTS  
BIBLIOGRAPHY**

**A CONTINUING BIBLIOGRAPHY**

**Section 2 • Indexes**

Indexes for the annotated references to NASA-owned inventions covered by U.S. patents and applications for patent that were announced in *Scientific and Technical Aerospace Reports (STAR)* between May 1969 and December 1986. This issue supersedes all previous Index Sections.



This supplement is available from the National Technical Information Service (NTIS), Springfield, Virginia 22161, price code A21.

# INTRODUCTION

Several thousand inventions result each year from the aeronautical and space research supported by the National Aeronautics and Space Administration. The inventions having important use in government programs or significant commercial potential are usually patented by NASA. These inventions cover practically all fields of technology and include many that have useful and valuable commercial application.

NASA inventions best serve the interests of the United States when their benefits are available to the public. In many instances, the granting of nonexclusive or exclusive licenses for the practice of these inventions may assist in the accomplishment of this objective. This bibliography is published as a service to companies, firms, and individuals seeking new, licensable products for the commercial market.

The *NASA Patent Abstracts Bibliography (NASA PAB)* is a semiannual NASA publication containing comprehensive abstracts and indexes of NASA-owned inventions covered by U.S. patents and applications for patent. The citations included in *NASA PAB* were originally published in NASA's *Scientific and Technical Aerospace Reports (STAR)* and cover *STAR* announcements made since May 1969.

For the convenience of the user, each issue of *NASA PAB* has a separately bound Abstract Section (Section 1) and Index Section (Section 2). Although each Abstract Section covers only the indicated six-month period, the Index Section is cumulative covering all NASA-owned inventions announced in *STAR* since 1969. Thus a complete set of *NASA PAB* would consist of the Abstract Sections of Issue 04 (January 1974) and Issue 12 (January 1978) and the Abstract Section for all subsequent issues and the Index Section for the most recent issue.

The 105 citations published in this issue of the Abstract Section cover the period July 1986 through December 1986. The Index Section references over 4500 citations covering the period May 1969 through December 1986.

## ABSTRACT SECTION (SECTION 1)

This *PAB* issue incorporates the 1975 *STAR* category revisions which include 10 major subdivisions divided into 74 specific categories and one general category/division. (See Table of Contents for the scope note of each category under which are grouped appropriate NASA inventions.) This new scheme was devised in lieu of the 34 category divisions which were utilized in *PAB* supplements (01) through (06) covering *STAR* abstracts from May 1969 through January 1974. Each entry in the Abstract Section consists of a *STAR* citation accompanied by an abstract and a key illustration taken from the patent or application for patent drawing. Entries are arranged in subject category in order of the ascending NASA Accession Number originally assigned in *STAR* to the invention. The range of NASA Accession Numbers within each issue is printed on the inside front cover.

**Abstract Citation Data Elements:** Each of the abstract citations has several data elements useful for identification and indexing purposes, as follows:

- NASA Accession Number
- NASA Case Number
- Inventor's Name
- Title of Invention
- U.S. Patent Application Serial Number
- U.S. Patent Number (for issued patents only)
- U.S. Patent Office Classification Number(s)  
(for issued patents only)

These data elements are identified in the Typical Citation and Abstract and in the indexes.

## INDEX SECTION (SECTION 2)

The Index Section is divided into five indexes. These indexes are cross-indexed and are used to locate a single invention or groups of inventions.

**Subject Index:** Lists all inventions according to appropriate alphabetized technical term and indicates the related NASA Case Number, the Subject Category Number, and the Accession Number.

**Inventor Index:** Lists all inventions according to alphabetized names of inventors and indicates the related NASA Case Number, the Subject Category Number, and the Accession Number.

**Source Index:** Lists all inventions according to alphabetized source of invention (i.e., name of contractor or government installation where invention was made) and indicates the related NASA Case Number, the Subject Category Number, and the Accession Number.

**Number Index:** Lists inventions in order of ascending (1) NASA Case Number, (2) U.S. Patent Application Serial Number, (3) U.S. Patent Classification Number, and (4) U.S. Patent Number and indicates the related Subject Category Number and the Accession Number.

**Accession Number Index:** Lists all inventions in order of ascending Accession Number and indicates the related Subject Category Number, the NASA Case Number, the U.S. Patent Application Serial Number, the U.S. Patent Classification Number, and the U.S. Patent Number.

## HOW TO USE THIS PUBLICATION TO IDENTIFY NASA INVENTIONS

To identify one or more NASA inventions within a specific technical field or subject, several techniques are possible with the flexibility incorporated into the *NASA PAB*.

(1) *Using Subject Category:* To identify all NASA inventions in any one of the subject categories in this issue of *NASA PAB*, select the desired Subject Category in the Abstract Section (Section 1) and find the inventions abstracted thereunder.

(2) *Using Subject Index:* To identify all NASA inventions listed under a desired technical subject index term, (A) turn to the cumulative Subject Index in the Index Section and find the invention(s) listed under the desired technical subject term. (B) Note the indicated Accession Number and the Subject Category Number. (C) Using the indicated Accession Number, turn to the inside front cover of the Index Section to determine which issue of the Abstract Section includes the Accession Number desired. (D) To find the abstract of the particular invention in the issue of the Abstract Section selected, (i) use the Subject Category Number to locate the Subject Category and (ii) use the Accession Number to locate the desired invention within the Subject Category listing.

(3) *Using Patent Classification Index:* To identify all inventions covered by issued NASA patents (does not include applications for patent) within a desired Patent Classification, (A) turn to the Patent Classification Number in the Number Index of Section 2 and find the associated invention(s), and (B) follow the instructions outlined in (2)(B), and (D) above.

# TYPICAL CITATION AND ABSTRACT

ON MICROFICHE

NASA SPONSORED

ACCESSION NUMBER → N86-20470\*# National Aeronautics and Space Administration.  
Langley Research Center, Hampton, Va.

CORPORATE SOURCE

TITLE → TELESCOPING SPACE STATION MODULES Patent  
Application

INVENTORS → R. D. WITCOFSKI, inventor (to NASA) 31 Jul. 1985 15 p

NASA CASE NUMBER → (NASA-CASE-LAR-13330-1; NAS 1.71:LAR-13330-1;

US-PATENT-APPL-SN-761233) Avail: NTIS HC A02/MF A01

PRICE CODE

US PATENT APPLICATIONS → CSCL 22B

AVAILABILITY SOURCE

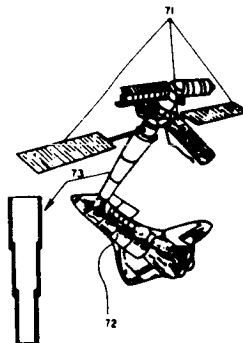
SERIAL NUMBER

COSATI CODE

A space station module consisting of a cylindrical can within a can is presented. The outer can, which has one open end, encloses the inner can. The inner can has one tapered end with a hatch and one untapered end with a hatch. The outer can has one tapered end with a hatch. The overall length of the outer can is 25 ft, and its outer diameter is 14 ft. Two such assemblies easily fit end to end in the Shuttle Orbiter payload bay. With a shuttle payload capability of 65,000 pounds and an approximate weight of each twin can assembly of 16,000 pounds, 33,000 pounds of payload are available for instrumenting the cans. Only the inner can can be instrumented prior to launch. Once in orbit, the module is expanded to provide twice the usable space, approximately 48 ft total length.

NASA

ABSTRACT



KEY ILLUSTRATION

# Subject Categories

(1969 - 1973)

## 01 Aerodynamics

Includes aerodynamics of bodies, combinations, internal flow in ducts and turbomachinery; wings, rotors, and control surfaces. For applications see: 02 Aircraft and 32 Space Vehicles. For related information see also: 12 Fluid Mechanics; and 33 Thermodynamics and Combustion.

## 02 Aircraft

Includes fixed-wing airplanes, helicopters, gliders, balloons, ornithopters, etc.; and specific types of complete aircraft (e.g., ground effect machines, STOL, and VTOL); flight tests; operating problems (e.g., sonic boom); safety and safety devices; economics; and stability and control. For basic research see: 01 Aerodynamics. For related information see also: 31 Space Vehicles; and 32 Structural Mechanics.

## 03 Auxiliary Systems

Includes fuel cells, energy conversion cells, and solar cells; auxiliary gas turbines; hydraulic, pneumatic and electrical systems; actuators; and inverters. For related information see also: 09 Electronic Equipment; 22 Nuclear Engineering; and 28 Propulsion Systems.

## 04 Biosciences

Includes aerospace medicine, exobiology, radiation effects on biological systems; physiological and psychological factors. For related information see also: 05 Biotechnology.

## 05 Biotechnology

Includes life support systems, human engineering; protective clothing and equipment; crew training and evaluation, and piloting. For related information see also: 04 Biosciences.

## 06 Chemistry

Includes chemical analysis and identification (e.g., spectroscopy). For applications see: 17 Materials, Metallic; 18 Materials, Nonmetallic; and 27 Propellants.

## 07 Communications

Includes communications equipment and techniques; noise; radio and communications blackout; modulation telemetry; tracking radar and optical observation; and wave propagation. For basic research see: 23 Physics, General; and 21 Navigation.

## 08 Computers

Includes computer operation and programming; and data processing. For applications, see specific categories. For related information see also: 19 Mathematics.

## 09 Electronic Equipment

Includes electronic test equipment and maintainability; component parts, e.g., electron tubes, tunnel diodes, transistors, integrated circuitry; microminiaturization. For basic research see: 10 Electronics. For related information see also: 07 Communications and 21 Navigation.

## 10 Electronics

Includes circuit theory; and feedback and control theory. For applications see: 09 Electronic Equipment. For related information see specific Physics categories.

## 11 Facilities, Research and Support

Includes airports; lunar and planetary bases including associated vehicles; ground support systems; related logistics; simulators; test facilities (e.g., rocket engine test stands, shock tubes, and wind tunnels); test ranges; and tracking stations.

## 12 Fluid Mechanics

Includes boundary-layer flow; compressible flow; gas dynamics; hydrodynamics; and turbulence. For related information see also: 01 Aerodynamics; and 33 Thermodynamics and Combustion.

## 13 Geophysics

Includes aeronomy; upper and lower atmosphere studies; oceanography; cartography; and geodesy. For related information see also: 20 Meteorology; 29 Space Radiation; and 30 Space Sciences.

## 14 Instrumentation and Photography

Includes design, installation, and testing of instrumentation systems; gyroscopes; measuring instruments and gages; recorders, transducers; aerial photography; and telescopes and cameras.

## 15 Machine Elements and Processes

Includes bearings, seals, pumps, and other mechanical equipment; lubrication, friction, and wear; manufacturing processes and quality control; reliability; drafting; and materials fabrication, handling, and inspection.

## 16 Masers

Includes applications of masers and lasers. For basic research see: 26 Physics, Solid-State.

## 17 Materials, Metallic

Includes cermets; corrosion; physical and mechanical properties of materials; metallurgy; and applications as structural materials. For basic research see: 06 Chemistry. For related information see also: 18 Materials, Nonmetallic; and 32 Structural Mechanics.

## 18 Materials, Nonmetallic

Includes corrosion; physical and mechanical properties of materials (e.g., plastics); and elastomers, hydraulic fluids, etc. For basic research see: 06 Chemistry. For related information see also: 17 Materials, Metallic; 27 Propellants; and 32 Structural Mechanics.

## 19 Mathematics

Includes calculation methods and theory; and numerical analysis. For applications see specific categories. For related information see also: 08 Computers.

**20 Meteorology**

Includes climatology; weather forecasting; and visibility studies. For related information see also: 13 Geophysics; and 30 Space Sciences.

**21 Navigation**

Includes guidance; autopilots; star and planet tracking; inertial platforms; and air traffic control. For related information see also: 07 Communications.

**22 Nuclear Engineering**

Includes nuclear reactors and nuclear heat sources used for propulsion and auxiliary power. For basic research see: 24 Physics, Atomic, Molecular, and Nuclear. For related information see also: 03 Auxiliary Systems; and 28 Propulsion Systems.

**23 Physics, General**

Includes acoustics, cryogenics, mechanics, and optics. For astrophysics see: 30 Space Sciences. For geophysics and related information see also: 13 Geophysics, 20 Meteorology, and 29 Space Radiation.

**24 Physics, Atomic, Molecular, and Nuclear**

Includes atomic, molecular and nuclear physics. For applications see: 22 Nuclear Engineering. For related information see also: 29 Space Radiation.

**25 Physics, Plasma**

Includes magnetohydrodynamics. For applications see: 28 Propulsion Systems.

**26 Physics, Solid-State**

Includes semiconductor theory; and superconductivity. For applications see: 16 Masers. For related information see also: 10 Electronics.

**27 Propellants**

Includes fuels; igniters; and oxidizers. For basic research see: 06 Chemistry; and 33 Thermodynamics and Combustion. For related information see also 28 Propulsion Systems.

**28 Propulsion Systems**

Includes air breathing, electric, liquid, solid, and magnetohydrodynamic propulsion. For nuclear propulsion see: 22 Nuclear Engineering. For basic research see: 23 Physics, General; and 33 Thermodynamics and Combustion. For applications see: 31 Space Vehicles. For related information see also: 27 Propellants.

**29 Space Radiation**

Includes cosmic radiation; solar flares; solar radiation; and Van Allen radiation belts. For related information see also: 13 Geophysics, and 24 Physics, Atomic, Molecular, and Nuclear.

**30 Space Sciences**

Includes astronomy and astrophysics; cosmology; lunar and planetary flight and exploration; and theoretical analysis of orbits and trajectories. For related information see also: 11 Facilities, Research and Support; and 31 Space Vehicles.

**31 Space Vehicles**

Includes launch vehicles; manned space capsules; clustered and multistage rockets; satellites; sounding rockets and probes; and operating problems. For basic research see: 30 Space Sciences. For related information see also: 28 Propulsion Systems; and 32 Structural Mechanics.

**32 Structural Mechanics**

Includes structural element design and weight analysis; fatigue; thermal stress; impact phenomena; vibration; flutter; inflatable structures; and structural tests. For related information see also: 17 Materials, Metallic; and 18 Materials, Nonmetallic.

**33 Thermodynamics and Combustion**

Includes ablation, cooling, heating, heat transfer, thermal balance, and other thermal effects; and combustion theory. For related information see also: 12 Fluid Mechanics; and 27 Propellants.

**34 General**

Includes information of a broad nature related to industrial applications and technology, and to basic research; defense aspects; information retrieval; management; law and related legal matters; and legislative hearings and documents.

# TABLE OF CONTENTS

## Subject Categories (1974- )

### AERONAUTICS

Includes aeronautics (general); aerodynamics; air transportation and safety; aircraft communications and navigation; aircraft design, testing and performance; aircraft instrumentation; aircraft propulsion and power; aircraft stability and control; and research and support facilities (air).

For related information see also *Astronautics*.

#### 01 AERONAUTICS (GENERAL)

#### 02 AERODYNAMICS

Includes aerodynamics of bodies, combinations, wings, rotors, and control surfaces; and internal flow in ducts and turbomachinery.

For related information see also *34 Fluid Mechanics and Heat Transfer*.

#### 03 AIR TRANSPORTATION AND SAFETY

Includes passenger and cargo air transport operations; and aircraft accidents.

For related information see also *16 Space Transportation* and *85 Urban Technology and Transportation*.

#### 04 AIRCRAFT COMMUNICATIONS AND NAVIGATION

Includes digital and voice communication with aircraft; air navigation systems (satellite and ground based); and air traffic control.

For related information see also *17 Spacecraft Communications, Command and Tracking* and *32 Communications*.

#### 05 AIRCRAFT DESIGN, TESTING AND PERFORMANCE

Includes aircraft simulation technology.

For related information see also *18 Spacecraft Design, Testing and Performance* and *39 Structural Mechanics*.

#### 06 AIRCRAFT INSTRUMENTATION

Includes cockpit and cabin display devices; and flight instruments.

For related information see also *19 Spacecraft Instrumentation* and *35 Instrumentation and Photography*.

#### 07 AIRCRAFT PROPULSION AND POWER

Includes prime propulsion systems and systems components, e.g., gas turbine engines and compressors; and on-board auxiliary power plants for aircraft.

For related information see also *20 Spacecraft Propulsion and Power*, *28 Propellants and Fuels*, and *44 Energy Production and Conversion*.

#### 08 AIRCRAFT STABILITY AND CONTROL

Includes aircraft handling qualities; piloting; flight controls; and autopilots.

#### 09 RESEARCH AND SUPPORT FACILITIES (AIR)

Includes airports, hangars and runways; aircraft repair and overhaul facilities; wind tunnels; shock tube facilities; and engine test blocks.

For related information see also *14 Ground Support Systems and Facilities (Space)*.

### ASTRONAUTICS

Includes astronautics (general); astrodynamics; ground support systems and facilities (space); launch vehicles and space vehicles; space transportation; spacecraft communications, command and tracking; spacecraft design, testing and performance; spacecraft instrumentation; and spacecraft propulsion and power.

For related information see also *Aeronautics*.

#### 12 ASTRONAUTICS (GENERAL)

For extraterrestrial exploration see *91 Lunar and Planetary Exploration*.

#### 13 ASTRODYNAMICS

Includes powered and free-flight trajectories; and orbit and launching dynamics.

#### 14 GROUND SUPPORT SYSTEMS AND FACILITIES (SPACE)

Includes launch complexes, research and production facilities; ground support equipment, e.g., mobile transporters; and simulators.

For related information see also *09 Research and Support Facilities (Air)*.

#### 15 LAUNCH VEHICLES AND SPACE VEHICLES

Includes boosters, manned orbital laboratories; reusable vehicles; and space stations.

#### 16 SPACE TRANSPORTATION

Includes passenger and cargo space transportation, e.g., shuttle operations; and rescue techniques.

For related information see also *03 Air Transportation and Safety* and *85 Urban Technology and Transportation*.

#### 17 SPACECRAFT COMMUNICATION, COMMAND AND TRACKING

Includes telemetry; space communications networks; astronavigation; and radio blackout.

For related information see also *04 Aircraft Communications and Navigation* and *32 Communications*.

#### 18 SPACECRAFT DESIGN, TESTING AND PERFORMANCE

Includes spacecraft thermal and environmental control; and attitude control.

For life support systems see *54 Man/System Technology and Life Support*. For related information see also *05 Aircraft Design, Testing and Performance* and *39 Structural Mechanics*.

#### 19 SPACECRAFT INSTRUMENTATION

For related information see also *06 Aircraft Instrumentation* and *35 Instrumentation and Photography*.

#### 20 SPACECRAFT PROPULSION AND POWER

Includes main propulsion systems and components, e.g., rocket engines; and spacecraft auxiliary power sources.

For related information see also *07 Aircraft Propulsion and Power*, *28 Propellants and Fuels*, and *44 Energy Production and Conversion*.



## **CHEMISTRY AND MATERIALS**

Includes chemistry and materials (general); composite materials; inorganic and physical chemistry; metallic materials; nonmetallic materials; and propellants and fuels.

### **23 CHEMISTRY AND MATERIALS (GENERAL)**

Includes biochemistry and organic chemistry.

### **24 COMPOSITE MATERIALS**

Includes laminates.

### **25 INORGANIC AND PHYSICAL CHEMISTRY**

Includes chemical analysis, e.g., chromatography; combustion theory; electrochemistry; and photochemistry.

For related information see also *77 Thermodynamics and Statistical Physics*.

### **26 METALLIC MATERIALS**

Includes physical, chemical, and mechanical properties of metals, e.g., corrosion; and metallurgy.

### **27 NONMETALLIC MATERIALS**

Includes physical, chemical, and mechanical properties of plastics, elastomers, lubricants, polymers, textiles, adhesives, and ceramic materials.

### **28 PROPELLANTS AND FUELS**

Includes rocket propellants, igniters, and oxidizers; storage and handling; and aircraft fuels.

For related information see also *07 Aircraft Propulsion and Power*, *20 Spacecraft Propulsion and Power*, and *44 Energy Production and Conversion*.

## **ENGINEERING**

Includes engineering (general); communications; electronics and electrical engineering; fluid mechanics and heat transfer; instrumentation and photography; lasers and masers; mechanical engineering; quality assurance and reliability; and structural mechanics.

For related information see also *Physics*.

### **31 ENGINEERING (GENERAL)**

Includes vacuum technology; control engineering; display engineering; and cryogenics.

### **32 COMMUNICATIONS**

Includes land and global communications; communications theory; and optical communications.

For related information see also *04 Aircraft Communications and Navigation* and *17 Spacecraft Communications, Command and Tracking*.

### **33 ELECTRONICS AND ELECTRICAL ENGINEERING**

Includes test equipment and maintainability; components, e.g., tunnel diodes and transistors; micro-miniaturization; and integrated circuitry.

For related information see also *60 Computer Operations and Hardware* and *76 Solid-State Physics*.

### **34 FLUID MECHANICS AND HEAT TRANSFER**

Includes boundary layers; hydrodynamics; fluidics; mass transfer; and ablation cooling.

For related information see also *02 Aerodynamics* and *77 Thermodynamics and Statistical Physics*.

### **35 INSTRUMENTATION AND PHOTOGRAPHY**

Includes remote sensors; measuring instruments and gages; detectors; cameras and photographic supplies; and holography.

For aerial photography see *43 Earth Resources*. For related information see also *06 Aircraft Instrumentation* and *19 Spacecraft Instrumentation*.

### **36 LASERS AND MASERS**

Includes parametric amplifiers.

### **37 MECHANICAL ENGINEERING**

Includes auxiliary systems (non-power); machine elements and processes; and mechanical equipment.

### **38 QUALITY ASSURANCE AND RELIABILITY**

Includes product sampling procedures and techniques; and quality control.

### **39 STRUCTURAL MECHANICS**

Includes structural element design and weight analysis; fatigue; and thermal stress.

For applications see *05 Aircraft Design, Testing and Performance* and *18 Spacecraft Design, Testing and Performance*.

## **GEOSCIENCES**

Includes geosciences (general); earth resources; energy production and conversion; environment pollution; geophysics; meteorology and climatology; and oceanography.

For related information see also *Space Sciences*.

### **42 GEOSCIENCES (GENERAL)**

### **43 EARTH RESOURCES**

Includes remote sensing of earth resources by aircraft and spacecraft; photogrammetry; and aerial photography.

For instrumentation see *35 Instrumentation and Photography*.

### **44 ENERGY PRODUCTION AND CONVERSION**

Includes specific energy conversion systems, e.g., fuel cells and batteries; global sources of energy; fossil fuels; geophysical conversion; hydroelectric power; and wind power.

For related information see also *07 Aircraft Propulsion and Power*, *20 Spacecraft Propulsion and Power*, *28 Propellants and Fuels*, and *85 Urban Technology and Transportation*.

### **45 ENVIRONMENT POLLUTION**

Includes air, noise, thermal and water pollution; environment monitoring; and contamination control.

### **46 GEOPHYSICS**

Includes aeronomy; upper and lower atmosphere studies; ionospheric and magnetospheric physics; and geomagnetism.

For space radiation see *93 Space Radiation*.

### **47 METEOROLOGY AND CLIMATOLOGY**

Includes weather forecasting and modification.

### **48 OCEANOGRAPHY**

Includes biological, dynamic and physical oceanography; and marine resources.

## **LIFE SCIENCES**

Includes sciences (general); aerospace medicine; behavioral sciences; man system technology and life support; and planetary biology.

### **51 LIFE SCIENCES (GENERAL)**

Includes genetics.

### **52 AEROSPACE MEDICINE**

Includes physiological factors; biological effects of radiation; and weightlessness.

### **53 BEHAVIORAL SCIENCES**

Includes psychological factors; individual and group behavior; crew training and evaluation; and psychiatric research.

### **54 MAN/SYSTEM TECHNOLOGY AND LIFE SUPPORT**

Includes human engineering; biotechnology; and space suits and protective clothing.

### **55 PLANETARY BIOLOGY**

Includes exobiology; and extraterrestrial life.

## **MATHEMATICAL AND COMPUTER SCIENCES**

Includes mathematical and computer sciences (general); computer operations and hardware; computer programming and software; computer systems; cybernetics; numerical analysis; statistics and probability; systems analysis; and theoretical mathematics.

### **59 MATHEMATICAL AND COMPUTER SCIENCES (GENERAL)**

### **60 COMPUTER OPERATIONS AND HARDWARE**

Includes computer graphics and data processing.  
For components see *33 Electronics and Electrical Engineering*.

### **61 COMPUTER PROGRAMMING AND SOFTWARE**

Includes computer programs, routines, and algorithms.

### **62 COMPUTER SYSTEMS**

Includes computer networks.

### **63 CYBERNETICS**

Includes feedback and control theory.  
For related information see also *54 Man/System Technology and Life Support*.

### **64 NUMERICAL ANALYSIS**

Includes iteration, difference equations, and numerical approximation.

### **65 STATISTICS AND PROBABILITY**

Includes data sampling and smoothing; Monte Carlo method; and stochastic processes.

### **66 SYSTEMS ANALYSIS**

Includes mathematical modeling; network analysis; and operations research.

## **67 THEORETICAL MATHEMATICS**

Includes topology and number theory.

## **PHYSICS**

Includes physics (general); acoustics; atomic and molecular physics; nuclear and high-energy physics; optics; plasma physics; solid-state physics; and thermodynamics and statistical physics.

For related information see also *Engineering*.

### **70 PHYSICS (GENERAL)**

For geophysics see *46 Geophysics*. For astrophysics see *90 Astrophysics*. For solar physics see *92 Solar Physics*.

### **71 ACOUSTICS**

Includes sound generation, transmission, and attenuation.

For noise pollution see *45 Environment Pollution*.

### **72 ATOMIC AND MOLECULAR PHYSICS**

Includes atomic structure and molecular spectra.

### **73 NUCLEAR AND HIGH-ENERGY PHYSICS**

Includes elementary and nuclear particles; and reactor theory.

For space radiation see *93 Space Radiation*.

### **74 OPTICS**

Includes light phenomena.

### **75 PLASMA PHYSICS**

Includes magnetohydrodynamics and plasma fusion.

For ionospheric plasmas see *46 Geophysics*. For space plasmas see *90 Astrophysics*.

### **76 SOLID-STATE PHYSICS**

Includes superconductivity.

For related information see also *33 Electronics and Electrical Engineering* and *36 Lasers and Masers*.

### **77 THERMODYNAMICS AND STATISTICAL PHYSICS**

Includes quantum mechanics; and Bose and Fermi statistics.

For related information see also *25 Inorganic and Physical Chemistry* and *34 Fluid Mechanics and Heat Transfer*.

## **SOCIAL SCIENCES**

Includes social sciences (general); administration and management; documentation and information science; economics and cost analysis; law and political science; and urban technology and transportation.

### **80 SOCIAL SCIENCES (GENERAL)**

Includes educational matters.

### **81 ADMINISTRATION AND MANAGEMENT**

Includes management planning and research.

**82 DOCUMENTATION AND  
INFORMATION SCIENCE**

Includes information storage and retrieval technology; micrography; and library science.

For computer documentation see *61 Computer Programming and Software*.

**83 ECONOMICS AND COST ANALYSIS**

Includes cost effectiveness studies.

**84 LAW AND POLITICAL SCIENCE**

Includes space law; international law; international cooperation; and patent policy.

**85 URBAN TECHNOLOGY AND  
TRANSPORTATION**

Includes applications of space technology to urban problems; technology transfer; technology assessment; and surface and mass transportation.

For related information see *03 Air Transportation and Safety*, *16 Space Transportation*, and *44 Energy Production and Conversion*.

**SPACE SCIENCES**

Includes space sciences (general); astronomy; astrophysics; lunar and planetary exploration; solar physics; and space radiation.

For related information see also *Geosciences*.

**88 SPACE SCIENCES (GENERAL)**

**89 ASTRONOMY**

Includes radio and gamma-ray astronomy; celestial mechanics; and astrometry.

**90 ASTROPHYSICS**

Includes cosmology; and interstellar and interplanetary gases and dust.

**91 LUNAR AND PLANETARY  
EXPLORATION**

Includes planetology; and manned and unmanned flights.

For spacecraft design see *18 Spacecraft Design, Testing and Performance*. For space stations see *15 Launch Vehicles and Space Vehicles*.

**92 SOLAR PHYSICS**

Includes solar activity, solar flares, solar radiation and sunspots.

**93 SPACE RADIATION**

Includes cosmic radiation; and inner and outer earth's radiation belts.

For biological effects of radiation see *52 Aerospace Medicine*. For theory see *73 Nuclear and High-Energy Physics*.

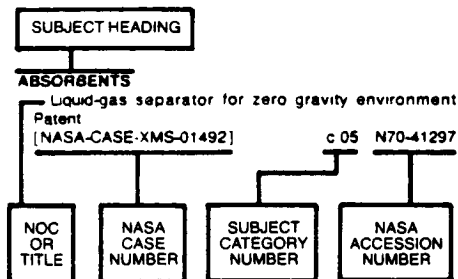
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**99 GENERAL**

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### Typical Subject Index Listing



The subject heading is a key to the subject content of the document. A brief description of the document, e.g., title, title plus a title extension, or Notation of Content (NOC), is included for each subject entry to indicate the subject heading context; these descriptions are arranged under each subject heading in ascending accession number order. The NASA Case Number serves as the prime access number to the patent documents. The Subject Category Number indicates the category in Section 1 (Abstracts) in which the patent citation and abstract are located. The NASA accession number denotes the number by which the citation is identified within the subject category.

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[NASA-CASE-NPO-15295-1] c 60 N85-21992
- ADENOSINE TRIPHOSPHATE**  
Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487
- Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355
- Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c 06 N71-17705
- Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions  
[NASA-CASE-GSC-11169-2] c 05 N73-32011
- Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794
- Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569
- ADHESION**  
Stud-bonding gun  
[NASA-CASE-MFS-20299] c 15 N72-11392
- Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209
- Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371
- ADHESION TESTS**  
Apparatus for the determination of the existence or non-existence of a bonding between two members Patent  
[NASA-CASE-MFS-13686] c 15 N71-18132
- ADHESIVE BONDING**  
Solar cell mounting Patent  
[NASA-CASE-XNP-00826] c 03 N71-20895
- Honeycomb panel and method of making same Patent  
[NASA-CASE-XMF-01402] c 18 N71-21651
- Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828
- Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992
- Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397
- Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215
- Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c 34 N78-18355
- Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c 27 N79-12221
- Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077
- Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855
- Structural pressure sensitive silicone adhesives  
[NASA-CASE-LAR-13270-1] c 27 N84-32532
- Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807
- Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125
- High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561
- Thermoplastics/thermosetting adhesive specimen bonding  
[NASA-CASE-LAR-13066-1] c 27 N86-20564
- Inductive energy for rapid strain gauge attachment  
[NASA-CASE-LAR-13237-1] c 35 N86-24960
- ADHESIVES**  
Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c 27 N75-29263
- Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c 27 N78-17205
- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206
- Thermal protection system  
[NASA-CASE-MSC-18796-1] c 24 N82-26389
- Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240
- Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323
- Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349
- Cathode for primary battery  
[NASA-CASE-NPO-16397-1-CU] c 33 N86-19517
- Copolyimides with a combination of flexibilizing groups  
[NASA-CASE-LAR-13354-1] c 27 N86-20566
- Aminophenoxycyclotriphosphazene cured epoxy resins and the composites, laminates and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N86-21686
- ADJUSTING**  
Instrument support with precise lateral adjustment Patent  
[NASA-CASE-XMF-00480] c 14 N70-39898
- Fine adjustment mount  
[NASA-CASE-MFS-20249] c 15 N72-11386
- Adjustable support  
[NASA-CASE-NPO-10721] c 15 N72-27484
- Clock setter  
[NASA-CASE-LAR-11458-1] c 35 N76-16392
- Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N86-24993
- AERIAL RUDDERS**  
Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130
- AEROACOUSTICS**  
Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c 05 N80-14107
- AEROBRAKING**  
Aerobraking orbital transfer vehicle  
[NASA-CASE-MSC-20921-1] c 18 N86-20471
- AERODYNAMIC BALANCE**  
Airplane automatic control force trimming device for asymmetric engine failures  
[NASA-CASE-LAR-13280-1] c 08 N86-20397
- AERODYNAMIC BRAKES**  
Annular supersonic decelerator or drogue Patent  
[NASA-CASE-XLE-00222] c 02 N70-37939
- Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators  
[NASA-CASE-LAR-10776-1] c 02 N74-10034
- AERODYNAMIC CHARACTERISTICS**  
Variable sweep wing aircraft Patent  
[NASA-CASE-XLA-00221] c 02 N70-33266
- Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087
- Space shuttle vehicle and system  
[NASA-CASE-MSC-12433] c 31 N73-14854
- Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil  
[NASA-CASE-LAR-10585-1] c 02 N76-22154
- Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999
- AERODYNAMIC CONFIGURATIONS**  
Variable-span aircraft Patent  
[NASA-CASE-XLA-00166] c 02 N70-34178
- Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858
- Space capsule Patent  
[NASA-CASE-XLA-00149] c 31 N70-37938
- Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41631
- Translating horizontal tail Patent  
[NASA-CASE-XLA-08801-1] c 02 N71-11043
- Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c 31 N71-15674
- Nacelle afterbody for jet engines Patent  
[NASA-CASE-XLA-10450] c 28 N71-21493
- Variable geometry rotor system  
[NASA-CASE-LAR-10557] c 02 N72-11018
- Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257
- Multistage aerospace craft --- perspective drawings of conceptual design  
[NASA-CASE-XMF-02263] c 05 N74-10907
- Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c 07 N74-28226
- Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061
- AERODYNAMIC DRAG**  
Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c 06 N81-17057
- AERODYNAMIC HEATING**  
Heat protection apparatus Patent  
[NASA-CASE-XLA-00892] c 33 N71-17897
- Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085
- Stand-off type ablative heat shield  
[NASA-CASE-MSC-12143-1] c 33 N72-17947
- AERODYNAMIC LOADS**  
Propeller blade loading control Patent  
[NASA-CASE-XAC-00139] c 02 N70-34856
- Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279
- AERODYNAMIC NOISE**  
Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c 09 N76-23273
- Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c 05 N80-14107

- Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999
- AERODYNAMIC STABILITY**
- Meteorological balloon Patent  
[NASA-CASE-XMF-04163] c 02 N71-23007
- Instrument for measuring the dynamic behavior of liquids Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387
- Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859
- High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c 05 N75-25914
- Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029
- Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277
- Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504
- AERODYNAMIC STALLING**
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968
- AEROELASTICITY**
- Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12458-1] c 44 N83-21503
- Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504
- AERONAUTICAL ENGINEERING**
- Differential pressure cell Patent  
[NASA-CASE-XAC-00042] c 14 N70-34816
- AEROSOLS**
- Liquid aerosol dispenser  
[NASA-CASE-MFS-20829] c 12 N72-21310
- Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509
- Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c 25 N78-15210
- Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184
- Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N86-24935
- AEROSPACE ENGINEERING**
- Solar cell including second surface mirrors Patent  
[NASA-CASE-NPO-10109] c 03 N71-11049
- Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c 15 N71-24046
- Soldering device Patent  
[NASA-CASE-XLA-08911] c 15 N71-27214
- Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c 37 N81-14317
- AEROSPACE ENVIRONMENTS**
- Electrostatic thruster with improved insulators Patent  
[NASA-CASE-XLE-01902] c 28 N71-10574
- Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-01765] c 18 N71-10772
- Inorganic solid film lubricants Patent  
[NASA-CASE-XMF-03988] c 15 N71-21403
- Particle detection apparatus including a ballistic pendulum Patent  
[NASA-CASE-XMS-04201] c 14 N71-22990
- Alloys for bearings Patent  
[NASA-CASE-XLE-05033] c 15 N71-23810
- Method and apparatus for varying thermal conductivity Patent  
[NASA-CASE-XNP-05524] c 33 N71-24876
- Space simulator Patent  
[NASA-CASE-NPO-10141] c 11 N71-24964
- Cyclic switch Patent  
[NASA-CASE-LEW-10155-1] c 09 N71-29035
- Automatic bioassess sampling  
[NASA-CASE-MSC-14640-1] c 54 N76-14804
- Wobble gear drive mechanism --- for aerospace environments  
[NASA-CASE-WOO-00625] c 37 N78-17385
- Plasma cleaning device --- designed for high vacuum environments  
[NASA-CASE-MFS-22906-1] c 75 N78-27913
- Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c 27 N78-32262
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c 12 N79-26075
- Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283
- Flexible diaphragm: Extreme temperature usage  
[NASA-CASE-MSC-20797-1] c 37 N86-20806
- AEROSPACE MEDICINE**
- Instrument for use in performing a controlled Valsalva maneuver Patent  
[NASA-CASE-XMS-01615] c 05 N70-41329
- Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721

## AEROSPACE VEHICLES

- Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c 02 N70-33286
- Landing pad assembly for aerospace vehicles Patent  
[NASA-CASE-XMF-02853] c 31 N70-36654
- Landing arrangement for aerospace vehicle Patent  
[NASA-CASE-XLA-00805] c 31 N70-38010
- Flexibly connected support and skin Patent  
[NASA-CASE-XLA-01027] c 31 N71-24035
- Nondestructive spot test method for titanium and titanium alloys  
[NASA-CASE-LAR-10539-1] c 17 N73-12547
- Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310
- AEROSPACEPLANES**
- Multistage aerospace craft --- perspective drawings of conceptual design  
[NASA-CASE-XMF-02263] c 05 N74-10907
- AFTERBODIES**
- Nacelle afterbody for jet engines Patent  
[NASA-CASE-XLA-10450] c 28 N71-21493
- Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231
- AFTERBURNING**
- Nozzle Patent  
[NASA-CASE-XLA-00154] c 28 N70-33374
- AGGLOMERATION**
- Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104
- AGING (MATERIALS)**
- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236
- AGRICULTURE**
- Solar-powered pump  
[NASA-CASE-NPO-13567-1] c 44 N76-29701
- AILERONS**
- Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809
- AIR**
- Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080
- Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710
- Solid sorbent air sampler  
[NASA-CASE-MSC-20653-1] c 35 N86-26595
- AIR BREATHING ENGINES**
- Multiple pure tone elimination strut assembly --- air breathing engines  
[NASA-CASE-FRC-11062-1] c 71 N82-16800
- AIR CONDITIONING**
- Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c 31 N80-32583
- Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N82-26776
- Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410
- AIR CONDITIONING EQUIPMENT**
- Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721
- Air conditioning system and component therefore distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c 31 N74-27902
- AIR COOLING**
- Modification and improvements to cooled blades Patent  
[NASA-CASE-XLE-00092] c 15 N70-33264
- AIR FILTERS**
- Gas filter mounting structure  
[NASA-CASE-MSC-12297] c 14 N72-23457
- AIR FLOW**
- Wind tunnel airstream oscillating apparatus Patent  
[NASA-CASE-XLA-00112] c 11 N70-33287
- Method of obtaining permanent record of surface flow phenomena Patent  
[NASA-CASE-XLA-01353] c 14 N70-41366
- Gas turbine combustor Patent  
[NASA-CASE-LEW-10286-1] c 28 N71-28915
- Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c 12 N73-28144
- Air conditioning system and component therefore distributing air flow from opposite directions  
[NASA-CASE-GSC-11445-1] c 31 N74-27902
- Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c 20 N76-14190
- Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c 37 N76-18456
- Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418
- Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384

- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089
- Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366
- AIR INTAKES**
- Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981
- Reversed cowl flap inlet thrust augmentor --- with adjustable airfoil  
[NASA-CASE-ARC-10754-1] c 07 N75-24736
- Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976
- Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999
- Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- AIR LOCKS**
- Spacecraft airlock Patent  
[NASA-CASE-XLA-02050] c 31 N71-22968
- Thruster maintenance system Patent  
[NASA-CASE-MFS-20325] c 28 N71-27095
- An airlock  
[NASA-CASE-MFS-20922] c 31 N72-20840
- Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136
- Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c 31 N74-27900
- AIR NAVIGATION**
- Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047
- Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132
- AIR POLLUTION**
- Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c 06 N71-13461
- Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922
- Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c 35 N74-11284
- Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c 45 N75-27585
- Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656
- Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742
- Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c 45 N76-31714
- Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497
- Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527
- AIR PURIFICATION**
- High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588
- Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721
- Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c 28 N81-24280
- AIR SAMPLING**
- Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824
- Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c 35 N76-18401
- Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407
- Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217
- AIR START**
- Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599
- AIR TRAFFIC CONTROL**
- Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287
- Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948
- Position location system and method  
[NASA-CASE-GSC-10087-3] c 07 N72-12080
- Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304
- AIR TRANSPORTATION**
- Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797

**AIRBORNE EQUIPMENT**

Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063

**AIRBORNE/SPACEBORNE COMPUTERS**

Ripple add and ripple subtract binary counters Patent  
[NASA-CASE-XGS-04766] c 08 N71-18602

Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c 60 N76-21914

**AIRCRAFT**

System for indicating direction of intruder aircraft  
[NASA-CASE-ERC-10226-1] c 14 N73-16483

Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c 32 N78-24391

System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443

**AIRCRAFT ACCIDENTS**

Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948

**AIRCRAFT ANTENNAS**

Spiral slotted phased antenna array  
[NASA-CASE-MS-C-18532-1] c 32 N82-27558

**AIRCRAFT COMPARTMENTS**

Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184

**AIRCRAFT CONFIGURATIONS**

Variable sweep wing configuration Patent  
[NASA-CASE-XLA-00230] c 02 N70-33255

Television simulation for aircraft and space flight Patent  
[NASA-CASE-XFR-03107] c 09 N71-19449

Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005

Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136

**AIRCRAFT CONSTRUCTION MATERIALS**

Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384

Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450

**AIRCRAFT CONTROL**

Control for flexible parawing Patent  
[NASA-CASE-XLA-06958] c 02 N71-11038

Attitude controls for VTOL aircraft Patent  
[NASA-CASE-XAC-08972] c 02 N71-20570

Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809

Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110

High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088

Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
[NASA-CASE-XAC-00048] c 02 N71-29128

Flight control system  
[NASA-CASE-MS-C-13397-1] c 21 N72-25595

Aircraft control system  
[NASA-CASE-ERC-10439] c 02 N73-19004

Display system  
[NASA-CASE-ERC-10350] c 14 N73-20474

Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004

Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930

High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c 05 N75-25914

Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c 08 N79-23097

Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106

Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c 08 N81-26152

Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N84-20522

Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985

Airplane automatic control force trimming device for asymmetric engine failures  
[NASA-CASE-LAR-13280-1] c 08 N86-20397

**AIRCRAFT DESIGN**

Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243

Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005

Multistage aerospace craft --- perspective drawings of conceptual design

[NASA-CASE-XMF-02263] c 05 N74-10907

High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c 05 N75-25914

Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c 05 N76-29217

Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c 05 N78-32086

Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N84-12092

Shapes for rotating airfoils  
[NASA-CASE-LAR-12396-1] c 02 N84-28732

**AIRCRAFT DETECTION**

Altitude measuring system  
[NASA-CASE-ERC-10412-1] c 09 N73-12211

Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296

**AIRCRAFT ENGINES**

Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c 07 N74-32418

Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c 07 N77-28118

Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599

Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392

Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808

**AIRCRAFT EQUIPMENT**

Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437

Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036

Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114

System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075

Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671

Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N86-26296

Fire resistant polyamide based on 1-(diorganooxyphosphonyl)methyl-2,4- and -2,6diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568

**AIRCRAFT FUEL SYSTEMS**

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467

**AIRCRAFT GUIDANCE**

Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-FRC-10049-1] c 04 N74-13420

Sun sensing guidance system for high altitude aircraft  
[NASA-CASE-FRC-11052-1] c 04 N82-23231

**AIRCRAFT HAZARDS**

Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788

**AIRCRAFT HYDRAULIC SYSTEMS**

Gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c 28 N73-19793

Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205

**AIRCRAFT INSTRUMENTS**

Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c 14 N70-36807

Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824

Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157

Optical projector system Patent  
[NASA-CASE-XNP-03853] c 23 N71-21882

Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268

Head-up attitude display  
[NASA-CASE-ERC-10392] c 21 N73-14692

G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c 35 N75-29381

Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c 04 N76-20114

Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140

Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733

System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443

**AIRCRAFT LANDING**

Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858

Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619

Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930

Vehicle simulator binocular multiplanar visual display system  
[NASA-CASE-ARC-10808-1] c 09 N76-24280

Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083

Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212

**AIRCRAFT LAUNCHING DEVICES**

Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c 09 N77-19076

**AIRCRAFT MANEUVERS**

G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c 35 N75-29381

**AIRCRAFT MODELS**

Test unit free-flight suspension system Patent  
[NASA-CASE-XLA-00839] c 11 N71-15926

Variable geometry wind tunnels  
[NASA-CASE-XLA-07430] c 11 N72-22246

Deploy/release system --- model aircraft flight control  
[NASA-CASE-LAR-11575-1] c 02 N76-16014

**AIRCRAFT NOISE**

Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c 07 N76-27232

Acoustic guide for noise transmission testing of aircraft  
[NASA-CASE-LAR-13111-1-CU] c 71 N86-20086

**AIRCRAFT PERFORMANCE**

Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257

**AIRCRAFT PILOTS**

Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c 09 N74-30597

**AIRCRAFT SAFETY**

Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c 14 N70-36807

Display research collision warning system  
[NASA-CASE-HCN-10703] c 21 N73-13643

Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421

Variable response load limiting device --- for aircraft seats  
[NASA-CASE-LAR-12801-1] c 37 N82-20544

Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394

Ice detector  
[NASA-CASE-LAR-13403-1] c 03 N86-24673

**AIRCRAFT SPIN**

Extended moment arm anti-spin device  
[NASA-CASE-LAR-12979-1] c 05 N85-21147

Dual towline spin-recovery device  
[NASA-CASE-LAR-13076-1] c 08 N85-35200

**AIRCRAFT STABILITY**

Mechanical stability augmentation system Patent  
[NASA-CASE-XLA-06339] c 02 N71-13422

Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004

**AIRCRAFT STRUCTURES**

Fatigue testing device Patent  
[NASA-CASE-XLA-02131] c 32 N70-42003

Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085

Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c 35 N74-13129

Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230

Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c 02 N77-10001

Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c 05 N83-19737

Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214

Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349

The 1-(diorganooxyphosphonyl)methyl-2, 4- and -2, 6-dinitro and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N86-20499

Ice detector  
[NASA-CASE-LAR-13403-1] c 03 N86-24673

Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630



- Fire resistant polyamide based on 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568
- AIRCRAFT TIRES**  
Improved tire/wheel concept --- pneumatic aircraft tire  
[NASA-CASE-LAR-11695-2] c 37 N80-18402  
Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c 37 N81-24443
- AIRCRAFT WAKES**  
System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300
- AIRFOIL PROFILES**  
Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136
- AIRFOILS**  
Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-00755] c 01 N71-13410  
Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-05828] c 01 N71-13411  
Wind tunnel  
[NASA-CASE-LAR-10135-1] c 09 N79-21083  
Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077  
Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947  
Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1] c 09 N86-31594
- AIRFRAMES**  
Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005  
Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992
- AIRSPEED**  
Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858  
Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296  
Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036  
Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295
- ALCOHOLS**  
Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244  
Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440  
Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144
- ALDEHYDES**  
Direct synthesis of polymeric Schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239  
Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMF-08656] c 06 N71-11242  
Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740  
Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c 27 N78-17214  
Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188
- ALIGNMENT**  
Instrument support with precise lateral adjustment Patent  
[NASA-CASE-XMF-00480] c 14 N70-39898  
Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371  
Optical alignment system Patent  
[NASA-CASE-XNP-02029] c 14 N70-41955  
Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688  
Aligning and positioning device Patent  
[NASA-CASE-XMS-04178] c 15 N71-22798  
Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125  
Roll alignment detector  
[NASA-CASE-GSC-10514-1] c 14 N72-20379  
Zero gravity shadow shield aligner  
[NASA-CASE-KSC-10622-1] c 31 N72-21893
- Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397  
Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c 18 N76-14186  
Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c 20 N76-21276  
Optical alignment device  
[NASA-CASE-ARC-10932-1] c 74 N76-22993  
Precision alignment apparatus for cutting a workpiece  
[NASA-CASE-LAR-11658-1] c 37 N77-14478  
Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c 37 N77-19457  
Simulator scene display evaluation  
[NASA-CASE-ARC-11504-1] c 09 N84-16221  
Rotary target V-block  
[NASA-CASE-LAR-12007-3] c 35 N84-16523  
Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650  
Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-1] c 37 N85-29289  
X-ray determination of parts alignment  
[NASA-CASE-MSC-20418-1] c 74 N86-20126  
Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N86-24993  
Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447
- ALIPHATIC COMPOUNDS**  
The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-LAR-11097-1] c 25 N82-24312
- ALKALI HALIDES**  
Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118
- ALKALI METALS**  
Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979  
Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527  
Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c 18 N71-24183  
Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-LEW-11358] c 03 N71-26084  
Preparation of alkali metal dispersions  
[NASA-CASE-XNP-08876] c 17 N73-28573  
Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229  
Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c 24 N79-31347  
Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596  
Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118
- ALKALINE BATTERIES**  
Method for determining the state of charge of batteries by the use of tracers Patent  
[NASA-CASE-XNP-01464] c 03 N71-10728  
Electrochemical coulometer and method of forming same Patent  
[NASA-CASE-XGS-05434] c 03 N71-20491  
Electrocatalyst for oxygen reduction  
[NASA-CASE-HQN-10537-1] c 06 N72-10138  
Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c 44 N78-25530  
Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c 44 N81-27615  
Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641  
Separator for alkaline batteries and method of making same  
[NASA-CASE-GSC-10350-1] c 44 N82-24642  
Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643  
Separator for alkaline electric batteries and method of making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644  
Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370  
Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708  
Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176
- Additive for zinc electrodes --- electric automobiles  
[NASA-CASE-LEW-13286-1] c 33 N84-14422  
Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144
- ALKALINE EARTH OXIDES**  
Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229
- ALKYL COMPOUNDS**  
Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c 06 N73-30101  
Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744
- ALKYNES**  
High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523
- ALLOYS**  
Brazing alloy Patent  
[NASA-CASE-XNP-03063] c 17 N71-23365  
Alloys for bearings Patent  
[NASA-CASE-XLE-05033] c 15 N71-23810  
Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875  
Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123  
Enhanced diffusion welding  
[NASA-CASE-LEW-11388-1] c 15 N73-32358  
Brazing alloy binder  
[NASA-CASE-XMF-05868] c 26 N75-27125  
Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127
- ALPHA PARTICLES**  
Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334
- ALPHANUMERIC CHARACTERS**  
X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c 33 N75-19517
- ALTERNATING CURRENT**  
Ac power amplifier Patent Application  
[NASA-CASE-LAR-10218-1] c 09 N70-34559  
Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c 10 N71-19418  
Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317  
Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799  
Pulse width inverter Patent  
[NASA-CASE-MFS-10068] c 10 N71-25139  
Inverter with means for base current shaping for sweeping charge carriers from base region Patent  
[NASA-CASE-XGS-06226] c 10 N71-25950  
A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253  
Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c 33 N74-14956  
Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c 44 N81-12542  
Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395  
Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422  
Motor power control circuit for ac induction motors  
[NASA-CASE-MFS-25323-1] c 33 N84-22886  
Coupling an induction motor type generator to ac power lines --- making windmill generators compatible with public power lines  
[NASA-CASE-MFS-25302-2] c 33 N84-33660  
Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661  
Power control for ac motor  
[NASA-CASE-MFS-25861-1] c 33 N85-22877  
Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083
- ALTIMETERS**  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376
- ALTITUDE**  
Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268
- ALTITUDE CONTROL**  
Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c 15 N70-37925
- ALUMINUM**  
Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443

- Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047
- Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828
- Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142
- Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830
- Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c 17 N71-25903
- Heat activated cell Patent  
[NASA-CASE-LEW-11359] c 03 N71-28579
- Method of making emf cell  
[NASA-CASE-LEW-11359-2] c 03 N72-20034
- Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c 24 N75-28135
- Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MSC-14435-1] c 37 N76-18455
- Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119
- Variable anodic thermal control coating  
[NASA-CASE-LAR-12719-1] c 44 N83-34449
- Diffusion oxygen barrier coating A02/MF A01  
[NASA-CASE-LAR-13474-1-SB] c 26 N86-24814
- ALUMINUM ALLOYS**
- Low temperature aluminum alloy Patent  
[NASA-CASE-XMF-02786] c 17 N71-20743
- Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828
- Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c 26 N78-24333
- Nical ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505
- Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214
- ALUMINUM COATINGS**
- Nickel aluminide coated low alloy stainless steel  
[NASA-CASE-LEW-11267-1] c 17 N73-32414
- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209
- Method of protecting the surface of a substrate --- by applying aluminide coating  
[NASA-CASE-LEW-11696-1] c 37 N75-13261
- Duplex aluminized coatings  
[NASA-CASE-LEW-11696-2] c 26 N75-19408
- Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c 35 N75-33367
- Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441
- Silicon-slurry/aluminide coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795
- ALUMINUM COMPOUNDS**
- Synthesis of dawsonites --- for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977
- Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118
- ALUMINUM OXIDES**
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143
- Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-3] c 24 N84-16262
- ALUMINUM SILICATES**
- Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c 18 N71-24184
- AMBIENT TEMPERATURE**
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191
- AMIDES**
- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- Method for preparing additive type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c 27 N81-14078
- AMINES**
- Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239
- Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812
- Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10468-1] c 25 N75-12086
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039
- Metal (2,4,4',4'',4''') phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281
- Laminate comprising fibers embedded in cured amine terminated bis-imide  
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- Amine terminated bispartimide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726
- AMINO ACIDS**
- Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844
- AMMONIA**
- Solid state chemical source for ammonia beam maser Patent  
[NASA-CASE-XGS-01504] c 16 N70-41578
- AMMONIUM NITRATES**
- High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c 28 N79-28342
- AMMONIUM PERCHLORATES**
- Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090
- Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471
- AMORPHOUS MATERIALS**
- Production of ultrapure amorphous metals utilizing acoustic cooling  
[NASA-CASE-NPO-15658-1] c 26 N83-19890
- Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005
- Diffusion oxygen barrier coating A02/MF A01  
[NASA-CASE-LAR-13474-1-SB] c 26 N86-24814
- Apparatus for production of ultrapure amorphous metals utilizing acoustic cooling  
[NASA-CASE-NPO-15658-1] c 26 N86-32551
- AMPLIFICATION**
- Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986
- Amplifier clamping circuit for horizon scanner Patent  
[NASA-CASE-XGS-01784] c 10 N71-20782
- Diversity receiving system with diversity phase lock Patent  
[NASA-CASE-XGS-01222] c 10 N71-20841
- Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256
- High voltage transistor amplifier with constant current load  
[NASA-CASE-NPO-11023] c 09 N72-17155
- Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c 36 N78-18410
- Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179
- Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c 33 N83-36356
- AMPLIFIER DESIGN**
- Automatic gain control system  
[NASA-CASE-XMS-05307] c 09 N69-24330
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c 33 N74-21851
- High power metallic halide laser --- amplifying a copper chloride laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616
- Reactanceless synthesized impedance bandpass amplifier  
[NASA-CASE-GSC-12788-1] c 33 N85-29145
- Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25688-1] c 33 N86-20670
- AMPLIFIERS**
- Stable amplifier having a stable quiescent point Patent  
[NASA-CASE-XGS-02812] c 09 N71-19466
- Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185
- High-gain, broadband traveling wave maser Patent  
[NASA-CASE-NPO-10548] c 16 N71-24831
- Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234
- Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739
- RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171
- Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c 33 N74-14939
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014
- Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c 36 N76-31512
- Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N83-13380
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191
- Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887
- Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N85-30201
- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N86-20679
- AMPLITUDE DISTRIBUTION ANALYSIS**
- System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39985
- Single or joint amplitude distribution analyzer Patent  
[NASA-CASE-XNP-01383] c 09 N71-10659
- Analog-to-digital converter  
[NASA-CASE-XNP-00477] c 08 N73-28045
- AMPLITUDE MODULATION**
- Signal generator  
[NASA-CASE-XNP-05612] c 09 N69-21468
- Demodulation system Patent  
[NASA-CASE-XAC-04030] c 10 N71-19472
- Amplitude modulated laser transmitter Patent  
[NASA-CASE-XMS-04269] c 16 N71-22895
- Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021
- Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142
- Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430
- Gated compressor, distortionless signal limiter  
[NASA-CASE-NPO-11820-1] c 32 N74-19788
- Amplitude steered array  
[NASA-CASE-GSC-11446-1] c 33 N74-20860
- Stark-effect modulation of CO<sub>2</sub> laser with NH<sub>2</sub>D  
[NASA-CASE-NPO-11945-1] c 36 N76-18427
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953
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[NASA-CASE-NPO-10169] c 10 N71-24844
- Acoustic rotation control  
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- High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147
- AMPOULES**
- Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220
- Reusable thermal cycling clamp  
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- ANALGESIA**
- Indomethacin-antihistamine combination for gastric ulceration control  
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[NASA-CASE-XMF-01097] c 10 N71-16058
- Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433
- Electronic divider and multiplier using photocells Patent  
[NASA-CASE-XFR-05637] c 09 N71-19480
- Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c 60 N75-13539
- Electronic analog divider  
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- Tuned analog network  
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- ANALOG COMPUTERS**  
Analog spatial maneuver computer  
[NASA-CASE-GSC-10880-1] c 08 N72-11172
- ANALOG DATA**  
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[NASA-CASE-NPO-10068] c 08 N71-19288  
Wide range data compression system Patent  
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[NASA-CASE-ERC-10048] c 09 N72-25251  
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[NASA-CASE-GSC-12115-1] c 62 N76-31946  
Velocity measurement system  
[NASA-CASE-MFS-23363-1] c 35 N78-32396
- ANALOG SIMULATION**  
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[NASA-CASE-GSC-11877-1] c 74 N76-18913
- ANALOG TO DIGITAL CONVERTERS**  
Analog-to-digital conversion system Patent  
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[NASA-CASE-XLA-00670] c 08 N71-12501  
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[NASA-CASE-XAC-04031] c 08 N71-18594  
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[NASA-CASE-LEW-10345-1] c 10 N71-25899  
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[NASA-CASE-NPO-10344] c 10 N71-26544  
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[NASA-CASE-XLA-06713] c 14 N71-28991  
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[NASA-CASE-NPO-11018] c 08 N72-21200  
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[NASA-CASE-NPO-10560] c 08 N72-22166  
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[NASA-CASE-NPO-11016] c 08 N72-31226  
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[NASA-CASE-NPO-11821-1] c 08 N73-26175  
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[NASA-CASE-NPO-13385-1] c 33 N76-18345  
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[NASA-CASE-GSC-11839-3] c 60 N77-32731  
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[NASA-CASE-LAR-11922-1] c 25 N79-24073  
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[NASA-CASE-ARC-11367-1] c 33 N83-21238  
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[NASA-CASE-ARC-10639-1] c 35 N78-13400
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[NASA-CASE-XMF-05224] c 14 N71-23726  
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- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968
- ANGLES (GEOMETRY)**  
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[NASA-CASE-XMF-04415] c 14 N71-24693  
Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c 19 N71-26674  
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Angular measurement system  
[NASA-CASE-MFS-25825-1] c 35 N85-20298  
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- ANGULAR ACCELERATION**  
Angular accelerometer Patent  
[NASA-CASE-XMS-05936] c 14 N70-41682
- ANGULAR CORRELATION**  
Device for determining relative angular position between a spacecraft and a radiation emitting celestial body  
[NASA-CASE-GSC-11444-1] c 14 N73-28490
- ANGULAR DISTRIBUTION**  
Noncontacting method for measuring angular deflection  
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- ANGULAR MOMENTUM**  
Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c 30 N70-40016  
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[NASA-CASE-LAR-12052-1] c 18 N81-29152  
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[NASA-CASE-MSC-20906-1] c 18 N86-19344
- ANGULAR RESOLUTION**  
Angular measurement system Patent  
[NASA-CASE-XMF-00447] c 14 N70-33179
- ANGULAR VELOCITY**  
Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c 14 N71-17585  
Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364  
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[NASA-CASE-MFS-22356-1] c 23 N75-30256  
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[NASA-CASE-ARC-11107-1] c 25 N80-16116  
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[NASA-CASE-NPO-13899-1] c 27 N80-32515  
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[NASA-CASE-ARC-11425-1] c 23 N83-28076  
Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376  
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[NASA-CASE-LAR-13354-1] c 27 N86-20566
- ANILINE**  
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[NASA-CASE-XMF-06409] c 06 N71-23230
- ANIMALS**  
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[NASA-CASE-ARC-10302-1] c 51 N74-15778  
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[NASA-CASE-ARC-10917-1] c 51 N78-27733
- ANISOTROPIC MEDIA**  
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[NASA-CASE-LEW-12118-1] c 24 N77-27188
- ANNEALING**  
Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062  
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[NASA-CASE-LAR-12304-1] c 35 N80-20559
- ANNULAR NOZZLES**  
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[NASA-CASE-XLE-00145] c 28 N70-36806  
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- ANNULAR PLATES**  
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[NASA-CASE-XLE-00222] c 02 N70-37939  
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[NASA-CASE-LEW-11358] c 03 N71-26084  
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[NASA-CASE-NPO-11806-1] c 44 N74-19693  
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[NASA-CASE-HQN-10876-1] c 33 N76-27473  
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[NASA-CASE-HQN-10862-1] c 44 N76-29699  
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[NASA-CASE-NPO-10870-1] c 33 N77-22386  
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[NASA-CASE-NPO-10857-1] c 33 N80-14330  
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[NASA-CASE-LEW-12919-1] c 24 N83-10117  
Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680
- ANODIC COATINGS**  
Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c 33 N71-29151  
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[NASA-CASE-LEW-12048-1] c 20 N77-20162  
Variable anodic thermal control coating  
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- ANOMALIES**  
Aircraft liftemeter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280
- ANTENNA ARRAYS**  
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[NASA-CASE-XLA-00414] c 07 N70-38200  
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[NASA-CASE-XLA-00901] c 07 N71-10775  
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[NASA-CASE-GSC-10452] c 07 N71-12396  
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[NASA-CASE-XGS-02290] c 07 N71-28809  
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[NASA-CASE-NPO-10301] c 07 N72-11148  
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[NASA-CASE-ARC-10285] c 10 N73-16206  
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[NASA-CASE-GSC-11013-1] c 09 N73-19234  
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[NASA-CASE-MSC-12593-1] c 17 N76-21250  
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[NASA-CASE-NPO-13886-1] c 32 N78-24391  
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- Baseband signal combiner for large aperture antenna array  
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[NASA-CASE-MSC-18606-1] c 32 N82-11336
- Spiral slotted phased antenna array  
[NASA-CASE-MSC-18532-1] c 32 N82-27558
- Method and apparatus for self-calibration and phasing of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493
- ANTENNA COMPONENTS**
- Digital servo controller --- for rotating antenna shaft  
[NASA-CASE-KSC-10769-1] c 33 N74-29556
- Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381
- ANTENNA COUPLERS**
- Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524
- ANTENNA DESIGN**
- Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c 07 N71-22750
- Nose cone mounted heat resistant antenna Patent  
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- Antenna array phase quadrature tracking system Patent  
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- Antenna design for surface wave suppression Patent  
[NASA-CASE-XLA-10772] c 07 N71-28980
- Target acquisition antenna  
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- Collapsible high gain antenna  
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- Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector  
[NASA-CASE-GSC-11760-1] c 33 N75-19516
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[NASA-CASE-LAR-11112-1] c 32 N76-15330
- Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
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[NASA-CASE-NPO-10539] c 07 N71-11285
- Horn feed having overlapping apertures Patent  
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- Target acquisition antenna  
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- Composite antenna feed  
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- Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c 32 N74-11000
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[NASA-CASE-XGS-02290] c 07 N71-28809
- Lightning tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110
- Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365
- Coaxial phased array antenna  
[NASA-CASE-MSC-16600-1] c 32 N81-14187
- ANTENNAS**
- Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c 31 N71-16102
- High impact antenna Patent  
[NASA-CASE-NPO-10231] c 07 N71-26101
- Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191
- Conical reflector antenna  
[NASA-CASE-NPO-10303] c 07 N72-22127
- Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568
- Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043
- Measurement apparatus and procedure for the determination of surface emissivities  
[NASA-CASE-LAR-13455-1] c 32 N86-24880
- ANTIBIOTICS**
- Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750
- ANTIFRICTION BEARINGS**
- Hybrid lubrication system and bearing Patent  
[NASA-CASE-XNP-01641] c 15 N71-22997
- Rolling element bearings Patent  
[NASA-CASE-XLE-09527-2] c 15 N71-26189
- High speed hybrid bearing comprising a fluid bearing and a rolling bearing connected in series  
[NASA-CASE-LEW-11152-1] c 15 N73-32359
- Production of hollow components for rolling element bearings by diffusion welding  
[NASA-CASE-LEW-11026-1] c 15 N73-33383
- Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916
- Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482
- ANTIGRAVITY**
- Anti-gravity device  
[NASA-CASE-MFS-22758-1] c 70 N75-26789
- ANTIHISTAMINICS**
- Indomethacin-anthistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c 52 N81-14613
- Indomethacin-anthistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c 52 N81-29764
- ANTIREFLECTION COATINGS**
- Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c 44 N77-14580
- Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597
- ANVILS**
- Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c 15 N72-20446
- APERTURES**
- Focussing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618
- Threadless fastener apparatus Patent  
[NASA-CASE-XFR-05302] c 15 N71-23254
- On-film optical recording of camera lens settings  
[NASA-CASE-MSC-12363-1] c 14 N73-26431
- Method of forming aperture plate for electron microscope  
[NASA-CASE-ARC-10448-2] c 74 N75-12732
- Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c 37 N76-23570
- Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408
- APOLLO PROJECT**
- Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012
- APOLLO SPACECRAFT**
- Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c 15 N70-35679
- Low onset rate energy absorber  
[NASA-CASE-MSC-12279] c 15 N72-17450
- APPLICATIONS OF MATHEMATICS**
- Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437
- APPROACH**
- Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059
- AQUATIC PLANTS**
- Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- AQUEOUS SOLUTIONS**
- Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c 23 N75-14834
- Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245
- Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c 51 N80-16715
- Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-1] c 26 N80-19237
- Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516
- Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c 25 N82-12166
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441
- Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371
- Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743
- ARC DISCHARGES**
- Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMF-08522] c 15 N71-19486
- Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c 25 N71-21693
- Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c 38 N74-15395
- Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c 33 N77-28385
- ARC HEATING**
- Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c 33 N70-34540
- Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628
- Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c 09 N77-10071
- ARC JET ENGINES**
- Magneto-plasma-dynamic arc thruster  
[NASA-CASE-LEW-11180-1] c 25 N73-25760
- ARC LAMPS**
- Starting circuit for vapor lamps and the like Patent  
[NASA-CASE-XNP-01058] c 09 N71-12540
- Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c 33 N77-21315
- Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c 33 N77-21316
- Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386
- Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238
- Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c 33 N80-14330
- Arc lamp power supply  
[NASA-CASE-LAR-13202-1] c 33 N86-32626
- ARC SPRAYING**
- Arc spray fabrication of metal matrix composite monotape  
[NASA-CASE-LEW-13828-1] c 24 N85-30027
- ARC WELDING**
- Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871
- Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433
- Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMF-08522] c 15 N71-19486
- Welding skate with computerized control Patent  
[NASA-CASE-XMF-07069] c 15 N71-23815
- Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c 37 N75-19683
- ARCHITECTURE**
- Foldable construction block  
[NASA-CASE-MSC-12233-2] c 32 N73-13921
- ARCHITECTURE (COMPUTERS)**
- Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c 60 N83-25378
- Distributed multiport memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342
- High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1CU] c 04 N86-27270

**ARGON**

Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826

**ARM (ANATOMY)**

Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c 09 N74-30597  
Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c 54 N75-12616  
Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c 37 N79-28551

**ARMATURES**

Direct current motor with stationary armature and field Patent  
[NASA-CASE-XGS-05290] c 09 N71-25999  
Solenoid valve including guide for armature and valve member  
[NASA-CASE-GSC-10607-1] c 15 N72-20442  
Electric motive machine including magnetic bearing  
[NASA-CASE-XGS-07805] c 15 N72-33476  
Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834

**AROMATIC COMPOUNDS**

Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156  
Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315  
Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232  
Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c 27 N78-32261  
Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c 27 N81-17260  
The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312

**ARRAYS**

Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c 32 N80-18253  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763

**ARTERIES**

Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566

**ARTIFICIAL CLOUDS**

Barium release system  
[NASA-CASE-LAR-10670-1] c 06 N73-30097

**ARTIFICIAL GRAVITY**

Rotating space station simulator Patent  
[NASA-CASE-XLA-03127] c 11 N71-10776  
Artificial gravity spin deployment system Patent  
[NASA-CASE-XNP-02595] c 31 N71-21881  
Space vehicle with artificial gravity and earth-like environment  
[NASA-CASE-LEW-11101-1] c 31 N73-32750

**ARTIFICIAL SATELLITES**

Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c 07 N71-24621  
Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324

**ASBESTOS**

Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MSC-12568-1] c 24 N76-14204

**ASPECT RATIO**

Variable sweep wing aircraft Patent  
[NASA-CASE-XLA-00221] c 02 N70-33266  
Variable-span aircraft Patent  
[NASA-CASE-XLA-00166] c 02 N70-34178  
Variable sweep aircraft wing Patent  
[NASA-CASE-XLA-00350] c 02 N70-38011

**ASPHALT**

Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c 27 N78-33228

**ASSAYING**

Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569

**ASSEMBLIES**

Multiple Belleville spring assembly Patent  
[NASA-CASE-XNP-00840] c 15 N70-38225  
Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c 37 N77-32501  
Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259  
Resilient seal ring assembly with spring means applying force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497

Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N85-20299  
Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N85-29287  
Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336  
X-ray determination of parts alignment  
[NASA-CASE-MSC-20418-1] c 74 N86-20126

**ASSEMBLING**

Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-1] c 37 N85-29289

**ASTRONAUT LOCOMOTION**

Rotating space station simulator Patent  
[NASA-CASE-XLA-03127] c 11 N71-10776  
Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194  
Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195  
Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161  
Foreshortened convolute section for a pressurized suit Patent  
[NASA-CASE-XMS-09637-1] c 05 N71-24730  
Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619  
Walking boot assembly  
[NASA-CASE-ARC-11101-1] c 54 N78-17675  
Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c 54 N79-24651

**ASTRONAUT MANEUVERING EQUIPMENT**

Hand-held self-maneuvering unit Patent  
[NASA-CASE-XMS-05304] c 05 N71-12336  
Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-18773  
Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585

**ASTRONAUT PERFORMANCE**

Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619  
Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735

**ASTRONAUT TRAINING**

Training vehicle for controlling attitude Patent  
[NASA-CASE-XMS-02977] c 11 N71-10746  
Mechanical simulator of low gravity conditions Patent  
[NASA-CASE-MFS-10555] c 11 N71-19494  
Subgravity simulator Patent  
[NASA-CASE-XMS-04798] c 11 N71-21474

**ASTRONAUTS**

Emergency lunar communications system  
[NASA-CASE-MFS-21042] c 07 N72-25171  
Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c 37 N74-18127

**ASTRONAVIGATION**

Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621

**ASTRONOMICAL PHOTOGRAPHY**

Apparatus for photographing meteors  
[NASA-CASE-LAR-10226-1] c 14 N73-19419

**ASTRONOMICAL TELESCOPES**

Solar optical telescope dome control system Patent  
[NASA-CASE-MSC-10966] c 14 N71-19568  
Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125  
Star image motion compensator  
[NASA-CASE-LAR-10523-1] c 14 N72-22444  
Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c 89 N79-10969

**ASYMMETRY**

Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361

**ATMOSPHERIC COMPOSITION**

Atmospheric sampling devices  
[NASA-CASE-NPO-11373] c 13 N72-25323  
Apparatus for sampling particulates in gases  
[NASA-CASE-HQN-10037-1] c 14 N73-27376  
Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c 35 N74-11284  
Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383  
Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217

**ATMOSPHERIC DENSITY**

System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443

**ATMOSPHERIC ENTRY**

Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087

Means for measuring the electron density gradients of the plasma sheath formed around a space vehicle Patent  
[NASA-CASE-XLA-06232] c 25 N71-20563  
Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c 19 N74-21015

**ATMOSPHERIC ENTRY SIMULATION**

Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c 25 N70-33267  
Flow field simulation Patent  
[NASA-CASE-LAR-11138] c 12 N71-20436

**ATMOSPHERIC MOISTURE**

Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681

**ATMOSPHERIC PHYSICS**

Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318

**ATMOSPHERIC PRESSURE**

Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229  
Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639

**ATMOSPHERIC RADIATION**

Method and apparatus for measuring solar activity and atmospheric radiation effects  
[NASA-CASE-ERC-10276] c 14 N73-26432

**ATMOSPHERIC REFRACTION**

Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-1] c 36 N81-22344

**ATMOSPHERIC SCATTERING**

Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028

**ATMOSPHERIC SOUNDING**

Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685

**ATMOSPHERIC TEMPERATURE**

System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443  
Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639

**ATMOSPHERIC TURBULENCE**

Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMF-14032] c 20 N71-16340  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493

**ATOMIC BEAMS**

Variable energy, high flux, ground-state atomic oxygen source  
[NASA-CASE-NPO-16640-1-CU] c 72 N86-27055

**ATOMIC EXCITATIONS**

Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N85-30779  
Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127

**ATOMIZERS**

Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654  
Constant-output atomizer --- Inhalation therapy and aerosol research  
[NASA-CASE-MFS-25631-1] c 34 N84-12406  
Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N86-24935

**ATOMS**

Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N85-30779

**ATS**

Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978

**ATTACHMENT**

Wide temperature range electronic device with lead attachment  
[NASA-CASE-ERC-10224-2] c 09 N73-27150

**ATTENUATORS**

Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420  
Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969

**ATTITUDE (INCLINATION)**

Analog spatial maneuver computer  
[NASA-CASE-GSC-10880-1] c 08 N72-11172  
Spacecraft attitude sensor  
[NASA-CASE-GSC-10890-1] c 21 N73-30640

Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c 35 N78-18391

**ATTITUDE CONTROL**

Visual target for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c 31 N69-27499  
Three axis controller Patent  
[NASA-CASE-XFR-00181] c 21 N70-33279  
Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297  
Attitude and propellant flow control system and method Patent  
[NASA-CASE-XMF-00185] c 21 N70-34539  
Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395  
Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c 21 N70-36938  
Attitude orientation of spin-stabilized space vehicles Patent  
[NASA-CASE-XLA-00281] c 21 N70-36943  
Ejection unit Patent  
[NASA-CASE-XNP-00676] c 15 N70-38996  
Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581  
Training vehicle for controlling attitude Patent  
[NASA-CASE-XMS-02977] c 11 N71-10746  
Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771  
Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545  
Spacecraft experiment pointing and attitude control system Patent  
[NASA-CASE-XLA-05464] c 21 N71-14132  
Attitude control system Patent  
[NASA-CASE-XGS-04393] c 21 N71-14159  
Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c 21 N71-15582  
Reactance control system Patent  
[NASA-CASE-XMF-01598] c 21 N71-15583  
Spacecraft attitude detection system by stellar reference Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642  
Three-axis finger tip controller for switches Patent  
[NASA-CASE-XAC-02405] c 09 N71-16089  
Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629  
Attitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880  
Attitude control system for sounding rockets Patent  
[NASA-CASE-XGS-01654] c 31 N71-24750  
Voice operated controller Patent  
[NASA-CASE-XLA-04063] c 31 N71-33160  
Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089  
Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c 35 N74-15094  
Sun direction detection system  
[NASA-CASE-NPO-13722-1] c 74 N77-22951  
Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130  
Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N84-20522  
Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247  
Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N85-20299  
Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N86-20396  
Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368

**ATTITUDE GYROS**

Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395  
Attitude control system  
[NASA-CASE-MFS-22787-1] c 15 N77-10113

**ATTITUDE INDICATORS**

Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089  
Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255  
Combined optical attitude and attitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268  
Head-up attitude display  
[NASA-CASE-ERC-10392] c 21 N73-14692  
Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c 19 N76-22284

Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036  
Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882

**ATTITUDE STABILITY**

Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295  
Apparatus for automatically stabilizing the attitude of a nonrigid vehicle  
[NASA-CASE-ARC-10134] c 30 N72-17873  
Method of damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c 18 N83-28064

**AUDIO EQUIPMENT**

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### BAYARD-ALPERT IONIZATION GAGES

Ionization vacuum gauge with all but the end of the ion collector shielded Patent  
[NASA-CASE-XLA-07424] c 14 N71-18482

### BAYS (STRUCTURAL UNITS)

Deployable geodesic truss structure A01  
[NASA-CASE-LAR-13113-1] c 31 N86-24867

### BEADS

Rotary bead dropper and selector for testing micrometeorite detectors Patent  
[NASA-CASE-XGS-03304] c 09 N71-22988  
Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618

### BEAM LEADS

Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c 33 N74-12951

### BEAM SPLITTERS

Optical range finder having nonoverlapping complete images  
[NASA-CASE-MSC-12105-1] c 14 N72-21409  
Laser extensometer  
[NASA-CASE-MFS-19259-1] c 36 N78-14380  
Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c 35 N78-18395  
Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c 73 N78-32848  
Interferometer  
[NASA-CASE-NPO-14502-1] c 74 N81-17888  
Collimated beam manifold with the number of output beams variable at a given output angle  
[NASA-CASE-MFS-25312-1] c 74 N83-17305  
Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949  
High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898

### BEAM SWITCHING

Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451] c 09 N71-10677  
Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233  
Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector  
[NASA-CASE-GSC-11760-1] c 33 N75-19516  
Single frequency, two feed dish antenna having switchable beamwidth  
[NASA-CASE-GSC-11968-1] c 32 N76-15329  
Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472

### BEAM WAVEGUIDES

Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135  
Optical frequency waveguide and transmission system Patent  
[NASA-CASE-HQN-10541-4] c 16 N71-27183  
Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125  
Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287  
Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900

## BEDS (PROCESS ENGINEERING)

### BEAMS (RADIATION)

Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c 16 N71-26154  
Optical frequency waveguide and transmission system  
[NASA-CASE-HQN-10541-3] c 23 N72-23695  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510  
Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c 32 N80-28578  
Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443  
Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072  
Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304  
Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065  
Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118  
Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N86-20780

### BEAMS (SUPPORTS)

Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895  
Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479  
Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605

### BEARING (DIRECTION)

Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331  
Radiation direction detector including means for compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c 14 N70-40239  
Interferometer direction sensor Patent  
[NASA-CASE-NPO-10320] c 14 N71-17655  
Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265  
Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056  
Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c 36 N81-24422  
System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075

### BEARINGS

Alloys for bearings Patent  
[NASA-CASE-XLE-05033] c 15 N71-23810  
Bearing and gimbal lock mechanism and spiral flex lead module Patent  
[NASA-CASE-GSC-10556-1] c 31 N71-26537  
Device for measuring bearing preload  
[NASA-CASE-MFS-20434] c 11 N72-25288  
Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c 37 N75-18574  
Magnetic bearing system  
[NASA-CASE-GSC-11978-1] c 37 N77-17464  
Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c 37 N77-28486  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500  
Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c 37 N77-32501  
Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482  
Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587  
Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043  
Magnetic bearing and motor  
[NASA-CASE-GSC-12726-1] c 37 N83-34323  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492  
Emitting vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N85-20299  
Portable 90 degree proof loading device  
[NASA-CASE-MSC-20250-1] c 35 N86-19581

### BEDS (PROCESS ENGINEERING)

Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c 15 N70-36901  
Solar heated oil shale pyrolysis process  
[NASA-CASE-NPO-16392-1] c 25 N86-25428



## BEER LAW

- A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090
- BEES**  
Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499
- BELLOWS**  
Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c 05 N69-21473  
Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960  
Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937  
Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686  
Shoulder and hip joint for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N84-33021  
Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706
- BELTS**  
Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c 31 N74-32917
- BENDING**  
Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436  
Means for suppressing or attenuating bending motion of elastic bodies Patent  
[NASA-CASE-XAC-05632] c 32 N71-23971  
Technique of elbow bending small jacketed transfer lines Patent  
[NASA-CASE-XNP-10475] c 15 N71-24679  
Forming tool for ribbon or wire  
[NASA-CASE-XLA-05966] c 15 N72-12408
- BENDING DIAGRAMS**  
Electrostatic charged particle analyzer having deflection members shaped according to the periodic voltage applied thereto Patent  
[NASA-CASE-XAC-05506-1] c 24 N71-16095
- BENDING FATIGUE**  
Apparatus for positioning and loading a test specimen Patent  
[NASA-CASE-XLE-01300] c 15 N70-41993  
Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMF-02964] c 14 N71-17659
- BENDING MOMENTS**  
Missile launch release system Patent  
[NASA-CASE-XMF-03198] c 30 N70-40353  
Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606
- BENDING VIBRATION**  
Viscous pendulum damper Patent  
[NASA-CASE-LAR-10274-1] c 14 N71-17626
- BENZENE**  
Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572  
The 1-(dialkoxyposphonyl)methyl-2,4- and -2,6-dinitro- and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-1] c 23 N83-28076  
Fire resistant polymers based on 1-(dialkoxyposphonyl)methyl-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11512-1] c 27 N84-20702  
Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525
- BERYLLIUM ALLOYS**  
Corrosion resistant beryllium Patent  
[NASA-CASE-LEW-10327] c 17 N71-33408  
Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015
- BERYLLIUM HYDRIDES**  
Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c 28 N79-14228
- BERYLLIUM OXIDES**  
High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c 33 N76-15373  
High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452  
High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455
- BIMETALS**  
Nonmagnetic thermal motor for a magnetometer  
[NASA-CASE-XAR-03786] c 09 N69-21313  
Thermostatic actuator  
[NASA-CASE-NPO-10637] c 15 N72-12409  
Thermal motor  
[NASA-CASE-NPO-11283] c 09 N72-25260

- Thermal compensating structural member  
[NASA-CASE-MFS-20433] c 15 N72-28496  
Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c 35 N74-15126  
Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454
- BINARY CODES**  
Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773  
Parallel generation of the check bits of a PN sequence Patent  
[NASA-CASE-XNP-04623] c 10 N71-26103  
Encoder/decoder system for a rapidly synchronizable binary code Patent  
[NASA-CASE-NPO-10342] c 10 N71-33407  
Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209  
Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c 60 N76-23850  
Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289  
Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c 32 N77-30308  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c 60 N78-17691  
Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313
- BINARY DATA**  
Binary magnetic memory device Patent  
[NASA-CASE-XGS-00174] c 08 N70-34743  
Ripple add and ripple subtract binary counters Patent  
[NASA-CASE-XGS-04766] c 08 N71-18602  
Computing apparatus Patent  
[NASA-CASE-XGS-04765] c 08 N71-18693  
Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613  
Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c 32 N74-26654  
Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c 60 N78-17691
- BINARY DIGITS**  
Logarithmic converter Patent  
[NASA-CASE-XLA-00471] c 08 N70-34778  
Full binary adder Patent  
[NASA-CASE-XGS-00689] c 08 N70-34787  
Binary number sorter Patent  
[NASA-CASE-NPO-10112] c 08 N71-12502  
Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505  
Display for binary characters Patent  
[NASA-CASE-XGS-04987] c 08 N71-20571  
Comparator for the comparison of two binary numbers Patent  
[NASA-CASE-XNP-04819] c 08 N71-23295  
High speed direct binary to binary coded decimal converter and scaler  
[NASA-CASE-KSC-10595] c 08 N73-12176  
A m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c 10 N73-20254  
Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c 60 N76-23850
- BINARY FLUIDS**  
Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503
- BINARY TO DECIMAL CONVERTERS**  
Binary to binary-coded-decimal converter Patent  
[NASA-CASE-XNP-00432] c 08 N70-35423  
High speed binary to decimal conversion system Patent  
[NASA-CASE-XGS-01230] c 08 N71-19544  
BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890  
High speed direct binary-to-binary coded decimal converter  
[NASA-CASE-KSC-10326] c 08 N72-21197  
Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c 60 N78-17691
- BINDERS (MATERIALS)**  
Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400  
Brazing alloy binder  
[NASA-CASE-XMF-05868] c 26 N75-27125  
Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c 24 N79-31347

## BINOCULARS

- Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c 74 N77-20882
- BIOASSAY**  
Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
[NASA-CASE-XGS-01231] c 14 N70-41676  
Flavin coenzyme assay  
[NASA-CASE-GSC-10565-1] c 06 N72-25149  
Method of detecting and counting bacteria in body fluids  
[NASA-CASE-GSC-11092-2] c 04 N73-27052  
Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844  
Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123  
Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c 51 N76-29891  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694  
Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750  
Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c 51 N80-16714
- BIODEGRADATION**  
Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- BIODYNAMICS**  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772  
Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c 39 N83-20280
- BIOELECTRIC POTENTIAL**  
Electrode for biological recording  
[NASA-CASE-XMS-02872] c 05 N69-21925  
Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120  
Process for control of cell division  
[NASA-CASE-LAR-10773-3] c 51 N77-25769
- BIOELECTRICITY**  
Plated electrodes Patent  
[NASA-CASE-XMS-04213-1] c 09 N71-26002  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698
- BIOENGINEERING**  
Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c 33 N74-21851  
Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772  
Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c 52 N81-14612  
Urine collection device  
[NASA-CASE-MSC-16433-1] c 52 N81-24711  
Bio-medical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c 52 N83-27577  
Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744  
Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388
- BIOINSTRUMENTATION**  
Temperature compensated solid state differential amplifier Patent  
[NASA-CASE-XAC-00435] c 09 N70-35440  
Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193  
Pressed disc type sensing electrodes with ion-screening means Patent  
[NASA-CASE-XMS-04212-1] c 05 N71-12346  
EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MSC-13282-1] c 05 N71-24729  
Plated electrodes Patent  
[NASA-CASE-XMS-04213-1] c 09 N71-26002  
Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c 52 N74-20726  
Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896  
Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c 52 N76-33835

- Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c 52 N77-10780
- Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c 52 N77-25772
- Corneal seal device  
[NASA-CASE-LEW-12258-1] c 52 N77-28716
- Snap-in compressible biomedical electrode  
[NASA-CASE-MS-C-14623-1] c 52 N77-28717
- Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580
- Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c 52 N80-18691
- Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969
- Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MS-C-16777-1] c 51 N80-27067
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072
- Logic-controlled occlusive cuff system  
[NASA-CASE-MS-C-14836-1] c 52 N82-11770
- Implantable electrical device  
[NASA-CASE-GSC-12560-1] c 52 N82-29863
- BIO LUMINESCENCE**
- Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355
- Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c 06 N71-17705
- Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794
- Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569
- BIO MEDICAL DATA**
- Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c 05 N71-19440
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c 52 N79-26771
- BIOMETRICS**
- Pressed disc type sensing electrodes with ion-screening means Patent  
[NASA-CASE-XMS-04212-1] c 05 N71-12346
- Compressible biomedical electrode  
[NASA-CASE-MS-C-13648] c 05 N72-27103
- Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c 52 N74-20726
- Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c 52 N76-33835
- Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c 52 N79-26771
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072
- Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703
- Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c 52 N81-29763
- BIOTELEMETRY**
- Telemeter adaptable for implanting in an animal Patent  
[NASA-CASE-XAC-05706] c 05 N71-12342
- Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MS-C-14180-1] c 52 N76-14757
- Accelerometer telemetry system  
[NASA-CASE-ARC-10849-1] c 17 N76-29347
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894
- BIPOLAR TRANSISTORS**
- Voltage regulator for battery power source --- using a bipolar transistor  
[NASA-CASE-FRC-10116-1] c 33 N79-23345
- Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494
- BIREFRINGENCE**
- Polarimeter for transient measurement Patent  
[NASA-CASE-XNP-08883] c 23 N71-16101
- BISMALEIMIDE**
- Amine terminated bisaspartimide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726
- BISMUTH**
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- BISMUTH COMPOUNDS**
- Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c 35 N75-13213
- BISTABLE CIRCUITS**
- AC logic flip-flop circuits Patent  
[NASA-CASE-XGS-00823] c 10 N71-15910
- BIT SYNCHRONIZATION**
- Telemetry word forming unit  
[NASA-CASE-XNP-09225] c 09 N69-24333
- Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c 07 N72-20140
- Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c 07 N73-13149
- Method and apparatus for a single channel digital communications system --- synchronization of received PCM signal by digital correlation with reference signal  
[NASA-CASE-NPO-11302-2] c 32 N74-10132
- BITERNARY CODE**
- Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917
- BITS**
- Parallel generation of the check bits of a PN sequence Patent  
[NASA-CASE-XNP-04623] c 10 N71-26103
- MOD 2 sequential function generator for multibit binary sequence  
[NASA-CASE-NPO-10636] c 08 N72-25210
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MS-C-12743-1] c 32 N79-10263
- BITUMENS**
- Oil shale extraction using super-critical extraction  
[NASA-CASE-NPO-15656-1] c 43 N84-23012
- BLACK BODY RADIATION**
- Black-body furnace Patent  
[NASA-CASE-XLE-01399] c 33 N71-15625
- Cavity radiometer Patent  
[NASA-CASE-XNP-08961] c 14 N71-24809
- Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475
- Black body cavity radiometer Patent  
[NASA-CASE-NPO-10810] c 14 N71-27323
- Stable density stratification solar pond  
[NASA-CASE-NPO-15419-2] c 44 N85-30474
- BLADDER**
- Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c 52 N81-25660
- BLADE TIPS**
- Modification and improvements to cooled blades Patent  
[NASA-CASE-XLE-00092] c 15 N70-33264
- Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560
- Oxidizing seal for a turbine tip gas path  
[NASA-CASE-LEW-14053-1] c 37 N85-34402
- BLADES**
- Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468
- BLADES (CUTTERS)**
- Line cutter Patent  
[NASA-CASE-XMS-04072] c 15 N70-42017
- Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c 52 N78-14773
- Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730
- BLAST LOADS**
- Linear explosive comparison  
[NASA-CASE-LAR-10800-1] c 33 N72-27959
- BLOOD**
- Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c 52 N75-15270
- Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c 52 N79-14749
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687
- BLOOD FLOW**
- Logic-controlled occlusive cuff system  
[NASA-CASE-MS-C-14836-1] c 52 N82-11770
- BLOOD PRESSURE**
- Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317
- Apparatus and method for processing Korotkov sounds --- for blood pressure measurement  
[NASA-CASE-MS-C-13999-1] c 52 N74-26626
- Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566
- Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c 54 N75-13531
- BLOOD VESSELS**
- Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-2] c 52 N83-29991
- BLUFF BODIES**
- Annular supersonic decelerator or drogue Patent  
[NASA-CASE-XLE-00222] c 02 N70-37939
- BLUNT BODIES**
- Flow field simulation Patent  
[NASA-CASE-LAR-11138] c 12 N71-20436
- BODIES OF REVOLUTION**
- Conforming polisher for aspheric surface of revolution Patent  
[NASA-CASE-XGS-02884] c 15 N71-22705
- Moment of inertia test fixture Patent  
[NASA-CASE-XGS-01023] c 14 N71-22992
- BODY FLUIDS**
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-22771
- Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c 51 N76-29891
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605
- BODY KINEMATICS**
- Space suit having improved waist and torso movement  
[NASA-CASE-ARC-10275-1] c 05 N72-22092
- Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c 37 N79-28551
- Kinesimetric method and apparatus  
[NASA-CASE-MS-C-18929-1] c 39 N83-20280
- BODY MEASUREMENT (BIOLOGY)**
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c 52 N76-33835
- Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580
- Kinesimetric method and apparatus  
[NASA-CASE-MS-C-18929-1] c 39 N83-20280
- Apparatus for determining changes in limb volume  
[NASA-CASE-MS-C-18759-1] c 52 N83-27578
- BODY TEMPERATURE**
- Garments for controlling the temperature of the body Patent  
[NASA-CASE-XMS-10269] c 05 N71-24147
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- BODY VOLUME (BIOLOGY)**
- Whole body measurement systems --- for weightlessness simulation  
[NASA-CASE-MS-C-13972-1] c 52 N74-10975
- Apparatus for determining changes in limb volume  
[NASA-CASE-MS-C-18759-1] c 52 N83-27578
- BODY-WING CONFIGURATIONS**
- Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061
- Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279
- BOILERS**
- Boiler for generating high quality vapor Patent  
[NASA-CASE-XLE-00785] c 33 N71-16104
- Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c 33 N72-20915
- Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597
- BOLOMETERS**
- Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent  
[NASA-CASE-XNP-01193] c 10 N71-16057
- Thin film capacitive bolometer and temperature sensor Patent  
[NASA-CASE-NPO-10607] c 09 N71-27232
- Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c 35 N79-33449
- BOLTS**
- Gas actuated bolt disconnect Patent  
[NASA-CASE-XLA-00326] c 03 N70-34667
- Despin weight release Patent  
[NASA-CASE-XLA-00679] c 15 N70-38601
- Inspection gage for boss Patent  
[NASA-CASE-XMF-04966] c 14 N71-17658
- Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489
- Fastener stretcher  
[NASA-CASE-GSC-11149-1] c 15 N73-30457
- Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630
- BONDING**
- Bonding graphite with fused silver chloride  
[NASA-CASE-XGS-00963] c 15 N69-39735

- Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
[NASA-CASE-LAR-10900-1] c 37 N74-23064
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260
- Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c 27 N76-14264
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431
- Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235
- Attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c 27 N82-29456
- Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521
- Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324
- Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126
- Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N86-19610
- Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841
- BONES**
- Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c 35 N75-12271
- Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c 52 N77-14737
- Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215
- BOOMS (EQUIPMENT)**
- Folding boom assembly Patent  
[NASA-CASE-XGS-00938] c 32 N70-41367
- Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191
- Minimech self-deploying boom mechanism  
[NASA-CASE-GSC-10566-1] c 15 N72-18477
- Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c 03 N72-25021
- Extended moment arm anti-spin device  
[NASA-CASE-LAR-12979-1] c 05 N85-21147
- BOOSTER RECOVERY**
- Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176
- Recoverable single stage spacecraft booster Patent  
[NASA-CASE-XMF-01973] c 31 N70-41588
- Orbiter/launch system  
[NASA-CASE-LAR-12250-1] c 14 N81-26161
- BOOSTER ROCKET ENGINES**
- Segmented back-up bar Patent  
[NASA-CASE-XMF-00640] c 15 N70-39924
- Recoverable single stage spacecraft booster Patent  
[NASA-CASE-XMF-01973] c 31 N70-41588
- Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784
- BOOTS (FOOTWEAR)**
- Walking boot assembly  
[NASA-CASE-ARC-11101-1] c 54 N78-17675
- BOREHOLES**
- Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N86-23750
- BORIDES**
- Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734
- BORING MACHINES**
- Boring bar drive mechanism Patent  
[NASA-CASE-XLA-03661] c 15 N71-33518
- Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c 46 N80-10709
- BORON**
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c 76 N74-20329
- BORON CARBIDES**
- Catalyst for growth of boron carbide single crystal whiskers  
[NASA-CASE-XHQ-03903] c 15 N69-21922
- BORON FLUORIDES**
- Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233
- BOROSILICATE GLASS**
- Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520
- BOULES**
- Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650
- BOUNDARY LAYER CONTROL**
- Double hinged flap Patent  
[NASA-CASE-XLA-01290] c 02 N70-42016
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968
- Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N86-26575
- BOUNDARY LAYER FLOW**
- Combined riblet and LEBU drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N85-28922
- BOUNDARY LAYER SEPARATION**
- Tertiary flow injection thrust vectoring system Patent  
[NASA-CASE-MFS-20831] c 28 N71-29153
- Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c 20 N76-14190
- Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976
- BOUNDARY LAYER TRANSITION**
- Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c 02 N80-20224
- Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N86-26575
- BOUNDARY LAYERS**
- Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692
- Apparatus for sensing temperature  
[NASA-CASE-XLE-05230] c 14 N72-27410
- BOXES (CONTAINERS)**
- Storage container for electronic devices Patent  
[NASA-CASE-MFS-20075] c 09 N71-26133
- Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N85-28951
- BRACKETS**
- Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483
- Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1] c 09 N86-31594
- BRAILLE**
- Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N86-25292
- BRAKES (FOR ARRESTING MOTION)**
- Frangible tube energy dissipation Patent  
[NASA-CASE-XLA-00754] c 15 N70-34850
- Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067
- Sprag solenoid brake --- development and operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c 37 N74-26976
- Reel safety brake  
[NASA-CASE-GSC-11960-1] c 37 N77-14479
- Motion restraining device  
[NASA-CASE-NPO-13619-1] c 37 N78-16369
- Moving body velocity arresting line --- stainless steel cables with energy absorbing sleeves  
[NASA-CASE-LAR-12372-1] c 37 N82-18601
- BRAKING**
- Regenerative braking system Patent  
[NASA-CASE-XMF-01096] c 10 N71-16030
- Linear magnetic brake with two windings Patent  
[NASA-CASE-XLE-05079] c 15 N71-17652
- Anemometer with braking mechanism Patent  
[NASA-CASE-XMF-05224] c 14 N71-23726
- BRAZING**
- Pretreatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N69-21471
- Process for applying a protective coating for salt bath brazing Patent  
[NASA-CASE-XLE-00046] c 15 N70-33311
- Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443
- Brazing alloy Patent  
[NASA-CASE-XNP-03063] c 17 N71-23365
- Brazing alloy binder  
[NASA-CASE-XMF-05868] c 26 N75-27125
- Brazing alloy composition  
[NASA-CASE-XMF-06053] c 26 N75-27126
- Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127
- Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MSC-14435-1] c 37 N76-18455
- BREATHING APPARATUS**
- Transfer valve Patent  
[NASA-CASE-XAC-01158] c 15 N71-23051
- Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c 54 N76-24900
- Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MSC-16182-1] c 54 N80-10799
- BRICKS**
- Foldable construction block  
[NASA-CASE-MSC-12233-2] c 32 N73-13921
- BRIGHTNESS**
- Light intensity modulator controller Patent  
[NASA-CASE-NPO-10140] c 09 N71-19479
- BRIGHTNESS DISCRIMINATION**
- Television signal processing system Patent  
[NASA-CASE-NPO-10140] c 07 N71-24742
- Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c 05 N73-26072
- Illumination control apparatus for compensating solar light  
[NASA-CASE-KSC-11010-1] c 74 N79-12890
- BRITTLENESS**
- Rock sampling --- apparatus for controlling particle size  
[NASA-CASE-XNP-10007-1] c 46 N74-23068
- Rock sampling --- method for controlling particle size distribution  
[NASA-CASE-XNP-09755] c 46 N74-23069
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- Vinyl styrylpyridines and their copolymerization with bismaleimide resins  
[NASA-CASE-ARC-11429-1-CU] c 27 N84-16341
- BROADBAND**
- Broadband choke for antenna structure  
[NASA-CASE-XMS-05303] c 07 N69-27462
- Flexible blade antenna Patent  
[NASA-CASE-MSC-12101] c 09 N71-18720
- Broadband frequency discriminator Patent  
[NASA-CASE-NPO-10096] c 07 N71-24583
- Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808
- High-gain, broadband traveling wave maser Patent  
[NASA-CASE-NPO-10548] c 16 N71-24831
- Wideband VCO with high phase stability Patent  
[NASA-CASE-XLA-03893] c 10 N71-27271
- Composite antenna feed  
[NASA-CASE-GSC-11046-1] c 07 N73-28013
- Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278
- Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597
- Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723
- BROADBAND AMPLIFIERS**
- Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331
- Cascaded complementary pair broadband transistor amplifiers Patent  
[NASA-CASE-NPO-10003] c 10 N71-26415
- BROADCASTING**
- Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c 32 N75-26194
- BROMINATION**
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380
- BROMINE**
- Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c 44 N76-18641
- BROMINE COMPOUNDS**
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451
- BRONZES**
- Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947
- BRUSHES**
- Method of making impurity-type semiconductor electrical contacts Patent  
[NASA-CASE-XMF-01016] c 26 N71-17818
- BRUSHES (ELECTRICAL CONTACTS)**
- Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017
- BUBBLES**
- Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442

## C

Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781

**BUCKLING**  
Miniature vibration isolator Patent  
[NASA-CASE-XLA-01019] c 15 N70-40156  
Compression test assembly  
[NASA-CASE-LAR-10440-1] c 14 N73-32323

**BUFFER STORAGE**  
Data handling system based on source significance, storage availability and data received from the source Patent Application  
[NASA-CASE-XNP-04162-1] c 08 N70-34675  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255  
Buffered analog converter  
[NASA-CASE-KSC-10397] c 08 N72-25206  
Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
[NASA-CASE-KSC-11048-1] c 62 N81-24779  
Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N86-25292

**BUFFERS (CHEMISTRY)**  
Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187

**BUILDINGS**  
Foldable construction block  
[NASA-CASE-MSC-12233-1] c 15 N72-25454

**BULBS**  
External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c 36 N79-14362

**BULKHEADS**  
Tank construction for space vehicles Patent  
[NASA-CASE-XMF-01899] c 31 N70-41948

**BUOYANCY**  
Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063

**BURNERS**  
Micronized coal burner facility  
[NASA-CASE-LEW-13426-1] c 25 N84-16276

**BURNING RATE**  
Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c 27 N71-21819  
Burn rate testing apparatus  
[NASA-CASE-XMS-09690] c 33 N72-25913  
Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c 28 N78-31255

**BURNOUT**  
Spherically-shaped rocket motor Patent  
[NASA-CASE-XHQ-01897] c 28 N70-35381

**BURNS (INJURIES)**  
Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783

**BUS CONDUCTORS**  
Test apparatus for locating shorts during assembly of electrical buses  
[NASA-CASE-ARC-11116-1] c 33 N82-24420

**BUTANES**  
Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227

**BUTT JOINTS**  
Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860  
Segmented back-up bar Patent  
[NASA-CASE-XMF-00640] c 15 N70-39924  
Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c 37 N75-27376

**BUTTERFLY VALVES**  
Flexible seal for valves Patent  
[NASA-CASE-XLE-00101] c 15 N70-33376

**BUTYRIC ACID**  
Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227

**BYPASSES**  
Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317  
Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c 07 N69-24323  
Current regulating voltage divider  
[NASA-CASE-MFS-20935] c 09 N71-34212  
Use of unilluminated solar cells as shunt diodes for a solar array  
[NASA-CASE-GSC-10344-1] c 03 N72-27053  
Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c 33 N78-17296  
Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293  
Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095

## CABLE FORCE RECORDERS

Winch having cable position and load indicators Patent  
[NASA-CASE-MSC-12052-1] c 15 N71-24599

**CABLES**  
Cable restraint  
[NASA-CASE-LAR-10129-1] c 15 N73-25512  
Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540

**CABLES (ROPES)**  
High-voltage cable Patent  
[NASA-CASE-XNP-00738] c 09 N70-38201  
Cable arrangement for rigid tethering Patent  
[NASA-CASE-XLA-02332] c 32 N71-17609  
Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701  
Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c 31 N71-21064  
Quick attach mechanism Patent  
[NASA-CASE-XFR-05421] c 15 N71-22994  
Flexible/rigidifiable cable assembly  
[NASA-CASE-MSC-13512-1] c 15 N72-22485  
Cable stabilizer for open shaft cable operated elevators  
[NASA-CASE-KSC-10513] c 15 N72-25453  
Reefing system  
[NASA-CASE-LAR-10129-2] c 37 N74-20063  
Emergency descent device  
[NASA-CASE-MFS-23074-1] c 54 N77-21844  
Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c 37 N80-32717  
Moving body velocity arresting line cables with energy absorbing sleeves  
[NASA-CASE-LAR-12372-1] c 37 N82-18601

**CADMIUM SULFIDES**  
High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088  
CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c 35 N80-20559  
Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826

**CALCIUM**  
Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c 35 N75-12271

**CALCIUM FLUORIDES**  
Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400  
Method of making self lubricating fluoride-metal composite materials Patent  
[NASA-CASE-XLE-08511-2] c 18 N71-16105

**CALCIUM OXIDES**  
Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c 25 N79-10162

**CALCIUM PHOSPHATES**  
Process for the preparation of brushite crystals  
[NASA-CASE-ERC-10338] c 04 N72-33072

**CALCULATORS**  
Sun angle calculator  
[NASA-CASE-MSC-12617-1] c 35 N76-29552

**CALCULI**  
Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913

**CALIBRATING**  
Self-calibrating displacement transducer Patent  
[NASA-CASE-XLA-00781] c 09 N71-22999  
Pressure transducer calibrator Patent  
[NASA-CASE-XNP-01660] c 14 N71-23036  
Apparatus for testing a pressure responsive instrument Patent  
[NASA-CASE-XMF-04134] c 14 N71-23755  
Phonocardiogram simulator Patent  
[NASA-CASE-XKS-10804] c 05 N71-24606  
Laser calibrator Patent  
[NASA-CASE-XLA-03410] c 16 N71-25914  
Radar calibration sphere  
[NASA-CASE-XLA-11154] c 07 N72-21117  
Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390  
System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c 35 N74-13132  
In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c 35 N74-15092  
Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MFS-21045-1] c 35 N75-15932  
Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c 35 N76-15432  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523

Electronically scanned pressure sensor module with in situ calibration capability  
[NASA-CASE-LAR-12230-1] c 35 N79-14347  
Calibrating pressure switch  
[NASA-CASE-XMF-04494-1] c 33 N79-33392  
Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c 32 N80-14281  
Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402  
Simulator scene display evaluation  
[NASA-CASE-ARC-11504-1] c 09 N84-16221  
Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931  
Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N84-25015  
Strain gage calibration  
[NASA-CASE-LAR-12743-1] c 35 N84-28019  
Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767  
Method and apparatus for self-calibration and phasing of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493  
Tone calibrated digital radio communication system  
[NASA-CASE-NPO-16414-1-CU] c 32 N85-29121  
Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276  
Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447  
Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697

**CALORIMETERS**  
Constant temperature heat sink for calorimeters Patent  
[NASA-CASE-XMF-04208] c 33 N71-29051  
Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c 34 N74-27859  
Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c 35 N81-19426

**CAMERA SHUTTERS**  
Electrically-operated rotary shutter Patent  
[NASA-CASE-XNP-00637] c 14 N70-40273  
Fast opening diaphragm Patent  
[NASA-CASE-XLA-03660] c 15 N71-21060  
Cyclically operable optical shutter  
[NASA-CASE-NPO-10758] c 14 N73-14427  
Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly --- for use with cameras mounted in satellites  
[NASA-CASE-GSC-11560-1] c 33 N74-20861

**CAMERAS**  
Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976  
Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474  
Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c 14 N71-28935  
Laser camera and diffusion filter therefore Patent  
[NASA-CASE-NPO-10417] c 16 N71-33410  
Optical binocular scanning apparatus  
[NASA-CASE-NPO-11002] c 14 N72-22441  
On-film optical recording of camera lens settings  
[NASA-CASE-MSC-12363-1] c 14 N73-26431  
Exposure interlock for oscilloscope cameras  
[NASA-CASE-LAR-10319-1] c 14 N73-32322  
Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c 35 N74-17153  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613  
Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c 35 N75-27328  
Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c 35 N76-18402

**CAMS**  
Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c 37 N77-27400  
Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c 07 N79-14095  
CAM controlled retractable door latch  
[NASA-CASE-MSC-20304-1] c 37 N82-31690

**CANARD CONFIGURATIONS**  
Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629  
Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c 05 N78-32086

- Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231
- CANCER**
- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751
- Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996
- CANOPIES**
- Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230
- Method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c 09 N82-29330
- Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c 05 N83-19737
- CANS**
- Canister closing device Patent  
[NASA-CASE-XLA-01446] c 15 N71-21528
- Extrusion can  
[NASA-CASE-NPO-10812] c 15 N73-13464
- CANTILEVER BEAMS**
- Inflatable support structure Patent  
[NASA-CASE-XLA-01731] c 32 N71-21045
- Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c 37 N79-10418
- CANTILEVER MEMBERS**
- Deployable solar cell array  
[NASA-CASE-NPO-10883] c 31 N72-22874
- Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c 35 N77-14407
- CAPACITANCE**
- Device for determining the accuracy of the flare on a flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785
- Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790
- Thin film capacitive bolometer and temperature sensor Patent  
[NASA-CASE-NPO-10607] c 09 N71-27232
- Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c 14 N72-22442
- Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c 33 N74-32712
- Direct reading inductance meter  
[NASA-CASE-NPO-13792-1] c 35 N77-32455
- Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c 33 N79-21265
- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N86-20679
- CAPACITANCE SWITCHES**
- Electrical discharge apparatus for forming Patent  
[NASA-CASE-XMF-00375] c 15 N70-34249
- Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819
- Feedback integrator with grounded capacitor Patent  
[NASA-CASE-XAC-10607] c 10 N71-23669
- CAPACITORS**
- Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c 14 N69-39937
- Space vehicle electrical system Patent  
[NASA-CASE-XMF-00517] c 03 N70-34157
- Apparatus having coaxial capacitor structure for measuring fluid density Patent  
[NASA-CASE-XLE-00143] c 14 N70-36618
- Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent  
[NASA-CASE-XLE-01246] c 14 N71-10797
- Capacitor and method of making same Patent  
[NASA-CASE-LEW-10364-1] c 09 N71-13522
- Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976
- Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225
- Thermoelectric radiometer utilizing polymer film  
[NASA-CASE-ARC-10138-1] c 14 N72-24477
- Screened circuit capacitors  
[NASA-CASE-LAR-10294-1] c 26 N72-28762
- Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477
- Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MSC-14339-1] c 05 N75-24716
- High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c 33 N76-15373
- Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c 44 N78-24608
- Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c 33 N78-32341

- Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c 33 N79-21265
- Laser activated MTOS microwave device  
[NASA-CASE-NPO-16112-1] c 33 N86-19516
- A water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N86-20755
- Ice detector  
[NASA-CASE-LAR-13403-1] c 03 N86-24673
- CAPILLARY FLOW**
- Capillary radiator Patent  
[NASA-CASE-XLE-03307] c 33 N71-14035
- Fluid lubricant system Patent  
[NASA-CASE-XNP-03972] c 15 N71-23048
- Soldering device Patent  
[NASA-CASE-XLA-08911] c 15 N71-27214
- Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c 37 N76-27568
- CAPILLARY TUBES**
- Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c 15 N71-15608
- Water separating system Patent  
[NASA-CASE-XMS-13052] c 14 N71-20427
- Mercury capillary interrupter Patent  
[NASA-CASE-XNP-02251] c 12 N71-20896
- Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428
- CARBAZOLES**
- Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c 03 N71-18698
- CARBIDES**
- Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748
- CARBOHYDRATES**
- Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499
- CARBON**
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184
- Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c 25 N82-12166
- Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555
- Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153
- Textured carbon surfaces on copper  
[NASA-CASE-LEW-14130-1] c 31 N85-20156
- Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597
- Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587
- CARBON ARCS**
- Water cooled contactor for anode in carbon arc mechanism  
[NASA-CASE-XMS-03700] c 15 N69-24266
- Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267
- CARBON COMPOUNDS**
- Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c 15 N71-16075
- Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152
- Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695
- CARBON DIOXIDE**
- Techniques for insulating cryogenic fuel containers Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015
- Miniature carbon dioxide sensor and methods  
[NASA-CASE-MSC-13332-1] c 14 N72-21408
- Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c 52 N79-21750
- CARBON DIOXIDE LASERS**
- Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c 16 N71-24832
- Power supply for carbon dioxide lasers  
[NASA-CASE-GSC-11222-1] c 16 N73-32391
- Stark-effect modulation of CO<sub>2</sub> laser with NH<sub>2</sub>D  
[NASA-CASE-NPO-11945-1] c 36 N76-18427
- Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-1SB] c 25 N86-32540
- Pretreatment and reactivation of an oxide-containing catalyst  
[NASA-CASE-LAR-13540-1SB] c 25 N86-32541

- CARBON DIOXIDE REMOVAL**
- Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c 25 N74-12813
- Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c 54 N77-32722
- Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MSC-16182-1] c 54 N80-10799
- CARBON FIBER REINFORCED PLASTICS**
- Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915
- Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c 37 N80-28711
- Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c 27 N81-17260
- CARBON FIBERS**
- Method and device for detection of a substance --- determining carbon fiber release in fire situations  
[NASA-CASE-NPO-14940-1] c 33 N83-31954
- Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950
- High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25436
- CARBON MONOXIDE**
- Carbon monoxide monitor --- using real time operation  
[NASA-CASE-MFS-22060-1] c 35 N75-29380
- CARBON-CARBON COMPOSITES**
- Lightweight piston  
[NASA-CASE-LAR-13150-1] c 24 N85-28975
- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- CARBONACEOUS MATERIALS**
- Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253
- CARBONATES**
- Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099
- Synthesis of dawsonites --- for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977
- CARBONIZATION**
- Method of carbonizing polyacrylonitrile fibers  
[NASA-CASE-ARC-11261-1] c 24 N83-25789
- CARBONYL COMPOUNDS**
- Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246
- CARBORANE**
- Process for the preparation of polycarbonylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271
- Carboranicyclopentaphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389
- Carboranyl-methylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- CARBOXYL GROUP**
- Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25929
- CARBOXYLIC ACIDS**
- Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980
- Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098
- Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884
- Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144
- Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455
- CARCINOGENS**
- Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
[NASA-CASE-XGS-01231] c 14 N70-41676
- CARDIAC VENTRICLES**
- Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724
- CARDIOGRAPHY**
- Digital cardiachometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896
- Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c 54 N75-27760

**CARDIOLOGY**

- Ratemeter  
[NASA-CASE-MFS-20418] c 14 N73-24473  
Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895

**CARDIOTACHOMETERS**

- Digital computing cardiometer Patent  
[NASA-CASE-MFS-20284-1] c 52 N74-12778

**CARDIOVASCULAR SYSTEM**

- G conditioning suit Patent  
[NASA-CASE-XLA-02898] c 05 N71-20268  
Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896  
Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388

**CARGO**

- Portable pallet weighing apparatus  
[NASA-CASE-GSC-12789-1] c 35 N85-20294

**CARRIER FREQUENCIES**

- Bi-carrier demodulator with modulation Patent  
[NASA-CASE-XMF-01160] c 07 N71-11298  
Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113  
Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c 33 N74-17930  
Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c 32 N74-20811  
Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539

**CARRIER LIFETIME**

- Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888  
Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-163371-1] c 33 N85-20251

**CARRIER WAVES**

- Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810  
Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981

**CARRIERS**

- Storage container for electronic devices Patent  
[NASA-CASE-MFS-20075] c 09 N71-26133  
Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744

**CARTESIAN COORDINATES**

- Random function tracer Patent  
[NASA-CASE-XLA-01401] c 15 N71-21179

**CARTRIDGES**

- Endless tape cartridge Patent  
[NASA-CASE-XGS-00769] c 14 N70-41647  
Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c 07 N71-10609  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c 25 N74-12813

**CASCADE CONTROL**

- Reversible ring counter employing cascaded single SCR stages Patent  
[NASA-CASE-XGS-01473] c 09 N71-10673  
Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c 10 N71-27136  
Multiloop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
[NASA-CASE-ARC-10192] c 09 N72-21245

**CASCADE FLOW**

- Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c 07 N76-18117  
Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293  
Degassing and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MS-18936-1] c 35 N83-29652

**CASE BONDED PROPELLANTS**

- Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179

**CASES (CONTAINERS)**

- Non-magnetic battery case Patent  
[NASA-CASE-XGS-00886] c 03 N71-11053  
Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876

- Portable heatable container  
[NASA-CASE-NPO-14237-1] c 44 N80-20808

**CASSEGRAIN ANTENNAS**

- Cassegrain antenna subreflector flange for suppressing ground noise Patent  
[NASA-CASE-XNP-00683] c 09 N70-35425  
Multi-feed cone Cassegrain antenna Patent  
[NASA-CASE-NPO-10539] c 07 N71-11285  
Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723  
Dual frequency microwave reflex feed  
[NASA-CASE-NPO-13091-1] c 09 N73-12214  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c 32 N74-11000

**CASTING**

- Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975  
Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440

**CASTINGS**

- Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c 37 N76-23570

**CATALYSIS**

- Decomposition unit Patent  
[NASA-CASE-XMS-00583] c 28 N70-38504  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c 25 N77-32255  
Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c 28 N80-10374

**CATALYSTS**

- Catalyst for growth of boron carbide single crystal whiskers  
[NASA-CASE-XHQ-03903] c 15 N69-21922  
Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c 15 N70-36901  
Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c 28 N70-41311  
Hydrogen leak detection device Patent  
[NASA-CASE-MFS-11537] c 14 N71-20442  
Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c 25 N74-12813  
Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116  
Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950  
Photoelectrochemical electrodes  
[NASA-CASE-NPO-15458-1] c 25 N84-12262  
Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721  
Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-1SB] c 25 N86-32540  
Pretreatment and reactivation of an oxide-containing catalyst  
[NASA-CASE-LAR-13540-1SB] c 25 N86-32541

**CATALYTIC ACTIVITY**

- Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808  
Pretreatment and reactivation of an oxide-containing catalyst  
[NASA-CASE-LAR-13540-1SB] c 25 N86-32541

**CATHETERIZATION**

- Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597  
Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896  
Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c 52 N83-21785  
Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095

**CATHODE RAY TUBES**

- Single or joint amplitude distribution analyzer Patent  
[NASA-CASE-XNP-01383] c 09 N71-10659  
Display for binary characters Patent  
[NASA-CASE-XGS-04987] c 08 N71-20571  
Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent  
[NASA-CASE-NPO-10625] c 09 N71-26182  
Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206  
Digital video display system using cathode ray tube  
[NASA-CASE-NPO-11342] c 09 N72-25248

- CRT blanking and brightness control circuit  
[NASA-CASE-KSC-10647-1] c 10 N72-31273  
Display system  
[NASA-CASE-ERC-10350] c 14 N73-20474  
Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-XNP-01296] c 33 N75-27250

**CATHODES**

- Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422  
Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
[NASA-CASE-XLE-04501] c 09 N71-23190  
Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-LEW-11358] c 03 N71-26084  
Ion thruster with a combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c 28 N73-24783  
Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c 44 N74-19693  
Apparatus for mounting a field emission cathode  
[NASA-CASE-LEW-14108-1] c 33 N85-29149  
Cathode for primary battery  
[NASA-CASE-NPO-16397-1-CU] c 33 N86-19517  
Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680

**CATIONS**

- Ionene membrane separator  
[NASA-CASE-NPO-11091] c 18 N72-22567  
Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104

**CAVITATION FLOW**

- Semitoroidal diaphragm cavitating valve Patent  
[NASA-CASE-XNP-09704] c 12 N71-18615

**CAVITIES**

- Black body cavity radiometer Patent  
[NASA-CASE-NPO-10810] c 14 N71-27323  
Method of coating through-holes Patent  
[NASA-CASE-XMF-05999] c 15 N71-29032  
Burrowing apparatus  
[NASA-CASE-XNP-07169] c 15 N73-32362  
Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c 20 N76-21276  
Method of making hollow elastomeric bodies  
[NASA-CASE-NPO-13535-1] c 37 N76-31524  
Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319  
Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MS-18606-1] c 32 N82-11336  
High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523  
Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143

**CAVITY RESONATORS**

- Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c 07 N69-24323  
System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MS-12259-1] c 07 N70-12616  
Temperature-compensating means for cavity resonator of amplifier Patent  
[NASA-CASE-XNP-00449] c 14 N70-35220  
Holder for crystal resonators Patent  
[NASA-CASE-XNP-03637] c 15 N71-21311  
System for improving signal-to-noise ratio of a communication signal  
[NASA-CASE-MS-12259-2] c 07 N72-33146  
Infrared tunable laser  
[NASA-CASE-ARC-10463-1] c 09 N73-32111  
Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c 36 N74-11313  
Laser apparatus  
[NASA-CASE-GSC-12237-1] c 36 N80-14384  
Laser Resonator  
[NASA-CASE-GSC-12565-1] c 36 N84-14509  
Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065  
Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143

**CELESTIAL BODIES**

- Device for determining relative angular position between a spacecraft and a radiation emitting celestial body  
[NASA-CASE-GSC-11444-1] c 14 N73-28490  
Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MS-12593-1] c 17 N76-21250



## CELESTIAL NAVIGATION

- Radiant energy intensity measurement system Patent  
[NASA-CASE-XNP-06510] c 14 N71-23797
- CELL ANODES**  
Heat activated cell Patent  
[NASA-CASE-LEW-11359] c 03 N71-28579  
Method of making emf cell  
[NASA-CASE-LEW-11359-2] c 03 N72-20034  
Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c 44 N77-14581
- CELL DIVISION**  
Process for control of cell division  
[NASA-CASE-LAR-10773-3] c 51 N77-25769
- CELLS**  
Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c 18 N71-20742
- CELLS (BIOLOGY)**  
System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694  
Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c 51 N80-16715  
Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126
- CELLULOSE**  
Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641  
Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643  
Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645  
Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370
- CELLULOSE NITRATE**  
Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- CENTRAL PROCESSING UNITS**  
Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651
- CENTRIFUGAL COMPRESSORS**  
Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-2] c 37 N84-28081
- CENTRIFUGAL FORCE**  
Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090
- CENTRIFUGES**  
Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815  
Separator Patent  
[NASA-CASE-XLA-00415] c 15 N71-16079  
Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c 34 N74-30608  
Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282  
Biocentrifuge system capable of exchanging specimen cages while in operational mode  
[NASA-CASE-MFS-23825-1] c 51 N81-32829
- CERAMIC BONDING**  
Method of making a diffusion bonded refractory coating Patent  
[NASA-CASE-XLE-01604-2] c 15 N71-15610  
Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312
- CERAMIC COATINGS**  
Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483  
Unfired-ceramic flame-resistant insulation and method of making the same Patent  
[NASA-CASE-MFO-01030] c 18 N70-41583  
Ceramic insulation for radiant heating environments and method of preparing the same Patent  
[NASA-CASE-MFS-14253] c 33 N71-24858  
Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729  
Two-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-1] c 27 N76-22377  
Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c 27 N76-23426  
Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492  
Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996  
Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855  
Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266

## CERAMIC NUCLEAR FUELS

- Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729
- CERAMICS**  
Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N71-33226  
Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c 18 N71-22998  
Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088  
Method of coating through-holes Patent  
[NASA-CASE-XMF-05999] c 15 N71-29032  
Extrusion can  
[NASA-CASE-NPO-10812] c 15 N73-13464  
Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584  
Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206  
High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302  
Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c 27 N79-12221  
High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213  
Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371  
Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674  
Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453  
Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748  
Method of fabricating an abrasible gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957  
Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886
- CEREBROSPINAL FLUID**  
Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c 52 N83-21785  
Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095
- CERMETS**  
Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076  
Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729  
Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NPO-13120-1] c 27 N76-15311  
High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c 27 N77-13217  
High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302  
High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213  
Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855  
Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555
- CESIUM**  
Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773  
Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c 25 N76-27383
- CESIUM DIODES**  
Thermionic tantalum emitter doped with oxygen Patent  
Application  
[NASA-CASE-NPO-11138] c 03 N70-34646  
Cavity emitter for thermionic converter Patent  
[NASA-CASE-NPO-10412] c 09 N71-28421  
Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175
- CESIUM ENGINES**  
Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
[NASA-CASE-XMF-00923] c 28 N70-36802  
Method of producing porous tungsten ionizers for ion rocket engines Patent  
[NASA-CASE-XLE-00455] c 28 N70-38197

## CESIUM VAPOR

- Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524
- CHALCOGENIDES**  
Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019
- CHAMBERS**  
Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MRS-25791-1] c 09 N84-27749
- CHANNEL FLOW**  
Method of making a regeneratively cooled combustion chamber Patent  
[NASA-CASE-XLE-00150] c 28 N70-41818  
Heated element fluid flow sensor Patent  
[NASA-CASE-MSC-12084-1] c 12 N71-17569  
Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930
- CHANNELS (DATA TRANSMISSION)**  
Automatic fault correction system for parallel signal channels Patent  
[NASA-CASE-XNP-03263] c 09 N71-18843  
Helical recorder arrangement for multiple channel recording on both sides of the tape  
[NASA-CASE-GSC-10614-1] c 09 N72-11224  
Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NPO-13321-1] c 32 N75-26195  
High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c 32 N80-18252
- CHARACTER RECOGNITION**  
Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c 33 N76-18353  
System and method for character recognition  
[NASA-CASE-NPO-11337-1] c 74 N81-19896
- CHARGE COUPLED DEVICES**  
CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N79-17134  
Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288  
CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N81-27396  
Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247  
Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037
- CHARGE DISTRIBUTION**  
Method of erasing target material of a vidicon tube or the like Patent  
[NASA-CASE-XNP-06028] c 09 N71-23189  
Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314
- CHARGE EFFICIENCY**  
State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596  
Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923
- CHARGE EXCHANGE**  
Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c 20 N77-10148
- CHARGE TRANSFER**  
Magnetic counter Patent  
[NASA-CASE-XNP-08836] c 09 N71-12515  
Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c 35 N78-17359  
Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N85-21360  
Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- CHARGE TRANSFER DEVICES**  
Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402  
Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403  
Image readout device with electronically variable spatial resolution  
[NASA-CASE-LAR-12633-1] c 33 N82-24416
- CHARGED PARTICLES**  
Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560

- Electrostatic charged particle analyzer having deflection members shaped according to the periodic voltage applied thereto Patent  
[NASA-CASE-XAC-05506-1] c 24 N71-16095
- Electrostatic collector for charged particles  
[NASA-CASE-LEW-11192-1] c 09 N73-13208
- Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c 33 N77-10429
- Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-28575
- Multistage spent particle collector and a method for making same  
[NASA-CASE-LEW-13914-1] c 37 N85-33489
- CHARGING**
- Synchronous orbit battery cyclor  
[NASA-CASE-GSC-11211-1] c 03 N72-25020
- CHARRING**
- Ablation sensor  
[NASA-CASE-XLA-01781] c 14 N69-39975
- Ablation sensor Patent  
[NASA-CASE-XLA-01794] c 33 N71-21586
- CHASSIS**
- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c 37 N79-33467
- CHECKOUT**
- Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566
- Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c 44 N76-14601
- Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359
- CHELATES**
- Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090
- Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383
- CHEMICAL ANALYSIS**
- Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527
- Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754
- Method for determining presence of OH in magnesium oxide  
[NASA-CASE-NPO-10774] c 06 N72-17095
- Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477
- Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c 25 N74-26947
- Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844
- Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c 35 N75-26334
- Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645
- Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184
- System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N83-31993
- Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279
- CHEMICAL AUXILIARY POWER UNITS**
- Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044
- CHEMICAL BONDS**
- Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c 27 N79-21191
- Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- CHEMICAL COMPOSITION**
- Phototropic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443
- Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c 28 N78-31255
- Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296
- Non-toxic invert analog glass compositions of high modulus  
[NASA-CASE-HQN-10328-2] c 27 N82-29454
- High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392
- Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N86-21685
- CHEMICAL COMPOUNDS**
- Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428
- CHEMICAL ELEMENTS**
- Apparatus for remote handling of materials --- mixing or analyzing dangerous chemicals  
[NASA-CASE-LAR-10634-1] c 37 N74-18123
- CHEMICAL ENGINEERING**
- Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c 25 N79-10162
- CHEMICAL EXPLOSIONS**
- Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c 09 N79-21084
- CHEMICAL INDICATORS**
- Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N86-20807
- CHEMICAL MACHINING**
- Masking device Patent  
[NASA-CASE-XNP-02092] c 15 N70-42033
- CHEMICAL PROPERTIES**
- Method of producing alternating ether siloxane copolymers Patent  
[NASA-CASE-XMF-02584] c 06 N71-20905
- Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099
- Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c 06 N73-33076
- Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058
- CHEMICAL REACTIONS**
- Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4,5-tetraamino-benzene Patent  
[NASA-CASE-XLA-03104] c 06 N71-11235
- Synthesis of polymeric schiff bases by schiff-base exchange reactions Patent  
[NASA-CASE-XMF-08651] c 06 N71-11236
- Preparation of ordered poly /arylenesiloxane/ polymers  
[NASA-CASE-XMF-10753] c 06 N71-11237
- Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238
- High resolution developing of photosensitive resists Patent  
[NASA-CASE-XGS-04993] c 14 N71-17574
- Inorganic solid film lubricants Patent  
[NASA-CASE-XMF-03988] c 15 N71-21403
- Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230
- Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740
- Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254
- Metal containing polymers from cyclic tetrameric phenylphosphonitriamides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363
- Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372
- Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701] c 06 N71-28620
- Process for preparation of high-molecular-weight polyaryloxysilanes Patent  
[NASA-CASE-XMF-08674] c 06 N71-28807
- Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808
- Method of making foamed materials in zero gravity  
[NASA-CASE-XMF-09902] c 15 N72-11387
- Preparation of high purity copper fluoride  
[NASA-CASE-LEW-10794-1] c 06 N72-17093
- Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465
- Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c 17 N72-28535
- Nondestructive spot test method for titanium and titanium alloys  
[NASA-CASE-LAR-10539-1] c 17 N73-12547
- Self-cycling fluid heater  
[NASA-CASE-MSC-15567-1] c 33 N73-16918
- Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710
- Polyurethanes from fluoroalkyl propylene glycol polyethers  
[NASA-CASE-MFS-10506] c 06 N73-30100
- Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c 06 N73-30103
- Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037
- Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043
- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228
- Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c 45 N76-31714
- Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229
- Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c 27 N81-14078
- The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352
- Fire-resistant phosphorus containing polyimides and copolyimides  
[NASA-CASE-ARC-11522-2] c 27 N85-34280
- The 1-(diorganooxyphosphonyl)methyl-2, 4- and -2, 6-dinitro and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N86-20499
- Copolyimides with a combination of flexibilizing groups  
[NASA-CASE-LAR-13354-1] c 27 N86-20566
- Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- CHEMICAL REACTORS**
- Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c 25 N79-28253
- Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c 37 N80-10494
- Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c 31 N80-18231
- Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144
- Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475
- Thermal reactor --- liquid silicon production from silane gas  
[NASA-CASE-NPO-14369-1] c 44 N83-10501
- Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583
- Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21852
- Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589
- CHEMICAL TESTS**
- Nondestructive spot test method for titanium and titanium alloys  
[NASA-CASE-LAR-10539-1] c 17 N73-12547
- Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039
- CHEMILUMINESCENCE**
- Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c 51 N80-16714
- CHEMISORPTION**
- Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N86-27467
- CHEMOTHERAPY**
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c 52 N81-14613
- CHIPS (ELECTRONICS)**
- Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441



## CHIRP SIGNALS

Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443

## CHLORINATION

Specialized halogen generator for purification of water  
Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933  
Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371  
Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743

## CHLORINE

Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253

## CHLOROPRENE RESINS

Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c 27 N74-12814

## CHOKES

Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154

## CHOKES (RESTRICTIONS)

Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270

## CHOLESTEROL

Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c 52 N75-15270

## CHROMATOGRAPHY

Chromatic fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c 25 N74-26947  
Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374

## CHROMIUM

Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599  
Efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c 44 N82-26777  
Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282  
Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721

## CHROMIUM ALLOYS

Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236  
Nical ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505

## CHROMIUM COMPOUNDS

Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205

## CHROMOSOMES

Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694

## CINEMATOGRAPHY

High speed photo-optical time recording  
[NASA-CASE-KSC-10294] c 14 N72-18411  
Holographic motion picture camera with Doppler shift compensation  
[NASA-CASE-MFS-22517-1] c 35 N76-18402

## CIRCUIT BOARDS

Electrical feed-through connection for printed circuit boards and printed cable  
[NASA-CASE-XMF-01483] c 14 N69-27431  
Printed cable connector Patent  
[NASA-CASE-XMF-00369] c 09 N70-36494  
Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960  
Electrical spot terminal assembly Patent  
[NASA-CASE-NPO-10034] c 15 N71-17685  
Polyimide resin-fiberglass cloth laminates for printed circuit boards  
[NASA-CASE-MFS-20408] c 18 N73-12604  
Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c 10 N73-25243  
Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918  
Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573  
Connector --- for connecting circuits on different layers of multilayer printed circuit boards  
[NASA-CASE-LAR-11709-1] c 37 N76-27567  
Traveling wave tube circuit  
[NASA-CASE-LEW-12013-1] c 33 N79-10339  
High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191  
Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118

## CIRCUIT BREAKERS

Mercury capillary interrupter Patent  
[NASA-CASE-XNP-02251] c 12 N71-20896  
Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796  
Separation simulator Patent  
[NASA-CASE-XKS-04631] c 10 N71-23663  
Detenting servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695  
Circuit breaker utilizing magnetic latching relays Patent  
[NASA-CASE-MS-C-11277] c 09 N71-29008  
Multiple circuit protector device  
[NASA-CASE-XMS-02744] c 33 N75-27249  
Solar concentrator protective system  
[NASA-CASE-NPO-15662-1] c 44 N84-28204

## CIRCUIT DIAGRAMS

Excitation and detection circuitry for a flux responsive magnetic head  
[NASA-CASE-XNP-04183] c 09 N69-24329  
Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334  
Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463  
Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500  
Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819  
Frequency shift keyed demodulator Patent  
[NASA-CASE-XGS-02889] c 07 N71-11282  
Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537  
High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c 09 N71-19516  
Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c 15 N71-20393  
Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c 07 N71-21476  
Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796  
Buck boost voltage regulation circuit Patent  
[NASA-CASE-GSC-10735-1] c 10 N71-26085  
Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256  
Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485  
Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c 77 N75-20140  
Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c 33 N75-31330  
Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c 33 N76-21390  
Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c 33 N77-13315

## CIRCUIT PROTECTION

Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146  
Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897  
Electrical load protection device Patent  
[NASA-CASE-MS-C-12135-1] c 09 N71-12526  
Apparatus for overcurrent protection of a push-pull amplifier Patent  
[NASA-CASE-MS-C-12033-1] c 09 N71-13531  
Method of coating circuit paths on printed circuit boards with solder Patent  
[NASA-CASE-XMF-01599] c 09 N71-20705  
Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543  
Selective plating of etched circuits without removing previous plating Patent  
[NASA-CASE-XGS-03120] c 15 N71-24047  
Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366  
Power responsive overload sensing circuit Patent  
[NASA-CASE-GSC-10667-1] c 10 N71-33129  
Saturation current protection apparatus for saturable core transformers  
[NASA-CASE-ERC-10075-2] c 09 N72-22196  
Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c 15 N72-25447  
Phase protection system for ac power lines  
[NASA-CASE-MS-C-17832-1] c 33 N74-14956  
Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c 33 N74-17929  
Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573  
Multiple circuit protector device  
[NASA-CASE-XMS-02744] c 33 N75-27249  
Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c 44 N78-14625

## Fused switch

[NASA-CASE-XMS-01244-1] c 33 N79-33393  
Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220  
Shielded conductor cable system  
[NASA-CASE-MS-C-12745-1] c 33 N81-27397  
Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404

## CIRCUIT RELIABILITY

Split-cross-bridge resistor for testing for proper fabrication of integrated circuits  
[NASA-CASE-NPO-16021-1] c 33 N85-30187

## CIRCUITS

Connector - Electrical  
[NASA-CASE-XLA-01288] c 09 N69-21470  
Binary magnetic memory device Patent  
[NASA-CASE-XGS-00174] c 08 N70-34743  
Electronic motor control system Patent  
[NASA-CASE-XMF-01129] c 09 N70-38712  
Starting circuit for vapor lamps and the like Patent  
[NASA-CASE-XNP-01058] c 09 N71-12540  
Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c 08 N71-19687  
High voltage divider system Patent  
[NASA-CASE-XLE-02008] c 09 N71-21583  
Solar cell and circuit array and process for nullifying magnetic fields Patent  
[NASA-CASE-XGS-03390] c 03 N71-23187  
Dual polarity full wave dc motor drive Patent  
[NASA-CASE-XNP-07477] c 09 N71-26092  
Temperature regulation circuit Patent  
[NASA-CASE-XNP-02792] c 14 N71-28958  
Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same Patent  
[NASA-CASE-XNP-00745] c 10 N71-28960  
Digital pulse width selection circuit Patent  
[NASA-CASE-XLA-07788] c 09 N71-29139  
Power responsive overload sensing circuit Patent  
[NASA-CASE-GSC-10667-1] c 10 N71-33129  
Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200  
Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c 03 N72-23048  
Controllable load insensitive power converters  
[NASA-CASE-ERC-10268] c 09 N72-25252  
Failsafe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c 09 N72-25262  
Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485  
Infinite range electronics gain control circuit  
[NASA-CASE-GSC-10786-1] c 10 N72-28241  
Active tuned circuit  
[NASA-CASE-GSC-11340-1] c 10 N72-33230  
Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428  
Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c 09 N73-30181  
Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c 54 N75-13531  
Peak holding circuit for extremely narrow pulses  
[NASA-CASE-MS-C-14129-1] c 33 N75-18479  
High voltage distributor  
[NASA-CASE-GSC-11849-1] c 33 N76-16332  
Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257  
Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389  
Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424  
Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c 33 N84-16452  
Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247  
Dielectric based submillimeter backward wave oscillator circuit  
[NASA-CASE-LEW-13736-1] c 33 N84-27974  
Processing circuit with asymmetry corrector and convolutional encoder for digital data  
[NASA-CASE-MS-C-20187-1] c 33 N85-20249  
High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147  
Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N85-30201  
Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333

- Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670
- CIRCULAR CONES**  
Optical inspection apparatus Patent  
[NASA-CASE-XMF-00462] c 14 N70-34298
- CIRCULAR CYLINDERS**  
Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479
- CIRCULAR POLARIZATION**  
Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c 09 N71-24595  
Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c 07 N72-11148  
Circularly polarized antenna  
[NASA-CASE-ERC-10214] c 09 N72-31235
- CIRCULAR TUBES**  
Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c 31 N74-14133  
Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797
- CIRCULATION CONTROL AIRFOILS**  
Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400
- CIRCULATORS (PHASE SHIFT CIRCUITS)**  
Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent  
[NASA-CASE-XNP-02140] c 09 N71-23097  
Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372
- CLAMPING CIRCUITS**  
Amplifier clamping circuit for horizon scanner Patent  
[NASA-CASE-XGS-01784] c 10 N71-20782
- CLAMPS**  
Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371  
Hydraulic grip Patent  
[NASA-CASE-XLA-05100] c 15 N71-17696  
Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813  
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[NASA-CASE-XNP-02341] c 15 N71-21531  
Quick attach mechanism Patent  
[NASA-CASE-XFR-05421] c 15 N71-22994  
Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744  
Clamp-mount device  
[NASA-CASE-MFS-25510-1] c 37 N84-16560  
Reusable thermal cycling clamp  
[NASA-CASE-LAR-12868-1] c 37 N85-21651
- CLAYS**  
Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c 18 N71-24184
- CLEAN ROOMS**  
Air conditioned suit  
[NASA-CASE-LAR-10076-1] c 05 N73-20137
- CLEANERS**  
Purge device for thrust engines Patent  
[NASA-CASE-XMS-04826] c 28 N71-28849  
Noncontaminating swabs  
[NASA-CASE-MFS-18100] c 15 N72-11390  
Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652
- CLEANING**  
Disk pack cleaning table Patent Application  
[NASA-CASE-LAR-10590-1] c 15 N70-26819  
System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724  
Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652  
Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N86-20807
- CLEAR AIR TURBULENCE**  
Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028  
CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040
- CLEARANCES**  
Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366  
Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- CLEAVAGE**  
Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730
- Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083
- CLIMBING FLIGHT**  
Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157
- CLINICAL MEDICINE**  
Process for the preparation of brushite crystals  
[NASA-CASE-ERC-10338] c 04 N72-33072  
Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c 35 N75-33368  
Production of I-123  
[NASA-CASE-LEW-11390-3] c 25 N76-29379  
Automated clinical system for chromosome analysis  
[NASA-CASE-NPO-13913-1] c 52 N79-12694  
Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783  
Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389
- CLIPS**  
Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388  
Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389
- CLOCKS**  
Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326  
Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137  
Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c 35 N75-30504  
Clock setter  
[NASA-CASE-LAR-11458-1] c 35 N76-16392
- CLOSED CIRCUIT TELEVISION**  
Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c 18 N76-14186
- CLOSED CYCLES**  
Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c 21 N70-41930  
Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c 33 N75-25040  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664
- CLOSED ECOLOGICAL SYSTEMS**  
Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207  
Space vehicle with artificial gravity and earth-like environment  
[NASA-CASE-LEW-11101-1] c 31 N73-32750  
Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c 54 N77-32722  
Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c 28 N81-24280
- CLOSTRIDIUM BOTULINUM**  
Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227
- CLOSURES**  
Canister closing device Patent  
[NASA-CASE-XLA-01446] c 15 N71-21528  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736
- CLOUD CHAMBERS**  
Heat transfer device  
[NASA-CASE-MFS-22938-1] c 34 N76-18374
- CLOUD COVER**  
Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232
- CLOUDS (METEOROLOGY)**  
Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318  
Electric field measuring and display system --- for cloud formations  
[NASA-CASE-KSC-10731-1] c 33 N74-27862
- CLUTCHES**  
Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N83-36484  
Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084  
Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N85-29290
- CLUTTER**  
Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968  
Method and apparatus for measuring distance  
[NASA-CASE-MSC-20912-1] c 32 N86-24879
- CMOS**  
Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321
- COAL**  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 31 N78-24387  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443  
Thickness measurement system  
[NASA-CASE-MFS-23721-1] c 31 N79-28370  
Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423  
Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c 43 N80-23711  
Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246  
Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371  
Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255  
Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709  
Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768  
Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722  
Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253
- COAL GASIFICATION**  
Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475  
Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583  
Micronized coal burner facility  
[NASA-CASE-LEW-13426-1] c 25 N84-16276  
Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N86-23744
- COAL LIQUEFACTION**  
Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152
- COAL UTILIZATION**  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527  
Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154  
Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144
- COATING**  
Method of coating circuit paths on printed circuit boards with solder Patent  
[NASA-CASE-XMF-01599] c 09 N71-20705  
Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436  
Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599  
Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233  
Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854  
Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940  
Textured carbon surfaces on copper  
[NASA-CASE-LEW-14130-1] c 31 N85-20156  
Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005  
Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587
- COATINGS**  
Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206  
Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c 27 N78-14164  
Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c 31 N79-21227  
Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176  
Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267

## COAXIAL CABLES

## COAXIAL CABLES

- Transmission line thermal short Patent  
[NASA-CASE-XNP-09775] c 09 N71-20445
- Coaxial cable connector Patent  
[NASA-CASE-XNP-04732] c 09 N71-20851
- Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597
- Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191
- Vibration isolation system using compression springs  
[NASA-CASE-NPO-11012] c 15 N72-11391
- Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c 15 N73-14469
- System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927
- Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c 33 N75-30430
- High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c 33 N80-18285

## COAXIAL PLASMA ACCELERATORS

- Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c 75 N76-17951

## COBALT

- Process for improving mechanical properties of epoxy resins by addition of cobalt ions  
[NASA-CASE-LAR-13230-1] c 24 N84-34571
- Metal (2,4,4',4'') phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281

## COBALT ALLOYS

- High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c 17 N71-15644
- High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c 17 N71-16025
- High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c 17 N71-23248
- Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415

## COBALT OXIDES

- High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206

## COCKPIT SIMULATORS

- Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c 11 N71-10748

## COCKPITS

- Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c 05 N83-19737

## CODERS

- Encoder/decoder system for a rapidly synchronizable binary code Patent  
[NASA-CASE-NPO-10342] c 10 N71-33407
- Modular encoder  
[NASA-CASE-NPO-10629] c 08 N72-18184
- Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MSC-14070-1] c 32 N74-32598
- Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c 62 N76-31946
- Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404

## CODING

- Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c 08 N71-22749
- Rate data encoder  
[NASA-CASE-LAR-10128-1] c 08 N73-20217
- Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c 60 N76-23850
- Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c 32 N77-12239
- Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c 60 N85-21992

## COEFFICIENT OF FRICTION

- Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c 35 N76-31489
- Locking redundant line  
[NASA-CASE-LAR-11900-1] c 37 N79-14382

## COENZYMES

- Flavin coenzyme assay  
[NASA-CASE-GSC-10565-1] c 06 N72-25149

## COHERENT ELECTROMAGNETIC RADIATION

- Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550
- Focused image holography with extended sources Patent  
[NASA-CASE-ERC-10019] c 16 N71-15551
- Off-axis coherently pumped laser  
[NASA-CASE-GSC-10791-1] c 15 N73-14469

## COHERENT LIGHT

- Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c 16 N71-15565
- Amplitude modulated laser transmitter Patent  
[NASA-CASE-XMS-04269] c 16 N71-22895
- Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994

## COHERENT RADIATION

- Laser communication system for controlling several functions at a location remote to the laser  
[NASA-CASE-LAR-10311-1] c 16 N73-16536
- Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c 35 N74-11284
- Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425
- Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589

## COINCIDENCE CIRCUITS

- Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c 33 N76-16331

## COLD CATHODES

- Meteoroid detector  
[NASA-CASE-LAR-10483-1] c 14 N73-32327

## COLD GAS

- Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c 09 N77-10071

## COLD WELDING

- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455

## COLD WORKING

- Hydroforming techniques using epoxy molds Patent  
[NASA-CASE-XLE-05641-1] c 15 N71-26346

## COLLAPSE

- Collapsible pistons  
[NASA-CASE-MSC-13789-1] c 11 N73-32152

## COLLECTION

- Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c 35 N75-19611
- Urine collection device  
[NASA-CASE-MSC-16433-1] c 52 N78-27750
- Absorbent product to absorb fluids --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c 24 N82-29362

## COLLIMATION

- Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c 36 N74-21091
- Optical alignment device  
[NASA-CASE-ARC-10932-1] c 74 N76-22993
- Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c 36 N77-32478
- Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c 35 N80-28686
- Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443
- Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680
- Ion beam accelerator system  
[NASA-CASE-NPO-15547-1] c 72 N84-16959
- Sonic levitation apparatus  
[NASA-CASE-MFS-25828-1] c 71 N84-28568
- Laser Schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N85-30932

## COLLIMATORS

- X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHQ-04106] c 14 N70-40240
- Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c 14 N73-30389
- Multiplate focusing collimator --- for scanning small near radiation sources  
[NASA-CASE-MFS-20932-1] c 35 N75-19616
- Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900

## COLLISION AVOIDANCE

- Cooperative Doppler radar system Patent  
[NASA-CASE-LAR-10403] c 21 N71-11766
- Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948
- Stacked array of omnidirectional antennas  
[NASA-CASE-LAR-10545-1] c 09 N72-21244
- Display research collision warning system  
[NASA-CASE-HON-10703] c 21 N73-13643
- Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641
- Satellite aided vehicle avoidance system  
[NASA-CASE-ERC-10419-1] c 03 N75-30132

## COLLOIDAL GENERATORS

- Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c 28 N70-33265

## COLLOIDAL PROPELLANTS

- Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c 28 N70-33265
- Low viscosity magnetic fluid obtained by the colloidal suspension of magnetic particles Patent  
[NASA-CASE-XLE-01512] c 12 N70-40124
- Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213

## COLLOIDS

- The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874

## COLOR

- Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446
- Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059

## COLOR PHOTOGRAPHY

- Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815
- Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432

## COLOR TELEVISION

- Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618
- Color television system  
[NASA-CASE-MSC-12146-1] c 07 N72-17109
- Scan converting video tape recorder  
[NASA-CASE-NPO-10166-1] c 07 N73-22076
- Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391
- System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c 74 N77-18893
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083

## COLOR VISION

- Color perception tester  
[NASA-CASE-KSC-10278] c 05 N72-16015

## COLUMNS

- Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c 31 N81-25258

## COLUMNS (PROCESS ENGINEERING)

- Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c 06 N69-39936

## COLUMNS (SUPPORTS)

- Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c 31 N81-27324

## COMBINATORIAL ANALYSIS

- Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437

## COMBUSTION

- Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503
- Rocket propellant injector Patent  
[NASA-CASE-XLE-00103] c 28 N70-33241
- Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411

## COMBUSTION CHAMBERS

- Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535
- Ignition system for monopropellant combustion devices Patent  
[NASA-CASE-XNP-00249] c 28 N70-38249
- Method of making a regeneratively cooled combustion chamber Patent  
[NASA-CASE-XLE-00150] c 28 N70-41818

- Control of transverse instability in rocket combustors Patent  
[NASA-CASE-XLE-04603] c 33 N71-21507
- Combustion chamber Patent  
[NASA-CASE-XLE-04857] c 28 N71-23968
- Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736
- Coaxial injector for reaction motors  
[NASA-CASE-NPO-11095] c 15 N72-25455
- Swirl can primary combustor  
[NASA-CASE-LEW-11326-1] c 23 N73-30665
- Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c 20 N74-32919
- Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11593-1] c 20 N76-14190
- Fuel combustor  
[NASA-CASE-LEW-12137-1] c 25 N78-10224
- Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c 34 N78-27357
- Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c 25 N79-11151
- Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c 34 N79-13288
- General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c 12 N79-26075
- Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298
- Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144
- Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N83-17628
- Micronized coal burner facility  
[NASA-CASE-LEW-13426-1] c 25 N84-16276
- Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958
- Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808
- Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFG-25989-1] c 20 N85-20008
- Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195
- COMBUSTION CONTROL**  
Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c 27 N71-21819
- COMBUSTION EFFICIENCY**  
Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c 28 N70-38199
- Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958
- COMBUSTION PHYSICS**  
Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405
- COMBUSTION PRODUCTS**  
Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922
- Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375
- System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NPO-13402-1] c 37 N76-18457
- Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527
- Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c 25 N79-11151
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- COMBUSTION STABILITY**  
Control of transverse instability in rocket combustors Patent  
[NASA-CASE-XLE-04603] c 33 N71-21507
- COMET TAILS**  
Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016
- COMFORT**  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445
- COMMAND AND CONTROL**  
Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289
- Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
[NASA-CASE-KSC-11048-1] c 62 N81-24779
- COMMAND MODULES**  
Low onset rate energy absorber  
[NASA-CASE-MS-C-12279] c 15 N72-17450
- COMMUNICATION**  
Communications link for computers  
[NASA-CASE-NPO-11161] c 08 N72-25207
- COMMUNICATION**  
Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c 07 N71-21476
- System for improving signal-to-noise ratio of a communication signal  
[NASA-CASE-MS-C-12259-2] c 07 N72-33146
- COMMUNICATION CABLES**  
Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986
- Process for making RF shielded cable connector assemblies and the products formed thereby  
[NASA-CASE-GSC-1215-1] c 09 N73-28083
- Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N76-24553
- High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c 32 N80-18252
- High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272
- Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669
- COMMUNICATION EQUIPMENT**  
Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c 07 N71-20814
- Decoder system Patent  
[NASA-CASE-NPO-10118] c 07 N71-24741
- Data-aided carrier tracking loops  
[NASA-CASE-NPO-11282] c 10 N73-16205
- Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174
- Differential phase shift keyed communication system  
[NASA-CASE-MS-C-14065-1] c 32 N74-26654
- COMMUNICATION SATELLITES**  
Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309
- Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent  
[NASA-CASE-XGS-02607] c 31 N71-23009
- Deep space monitor communication satellite system Patent  
[NASA-CASE-XAC-06029-1] c 31 N71-24813
- Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900
- Satellite aided vehicle avoidance system  
[NASA-CASE-ERC-10419-1] c 03 N75-30132
- Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323
- COMMUTATION**  
High speed low level electrical stepping switch Patent  
[NASA-CASE-XAC-00060] c 09 N70-39915
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393
- COMMUTATORS**  
Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432
- Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199
- COMPARATOR CIRCUITS**  
Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692
- Pulsed differential comparator circuit Patent  
[NASA-CASE-XLE-03804] c 10 N71-19471
- Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c 44 N78-14625
- Window comparator  
[NASA-CASE-FRC-10090-1] c 33 N78-18308
- COMPARATORS**  
Fluid flow meter with comparator reference means Patent  
[NASA-CASE-XGS-01331] c 14 N71-22996
- Comparator for the comparison of two binary numbers Patent  
[NASA-CASE-XNP-04819] c 08 N71-23295
- High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454
- Comparator with noise suppression  
[NASA-CASE-LAR-13151-1] c 33 N85-20247
- Neighborhood comparison operator  
[NASA-CASE-NPO-14644-1CU] c 60 N86-24224
- COMPENSATORS**  
Star image motion compensator  
[NASA-CASE-LAR-10523-1] c 14 N72-22444
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029
- Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082
- Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138
- COMPLEX COMPOUNDS**  
Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174
- COMPONENT RELIABILITY**  
Acoustic guide for noise transmission testing of aircraft  
[NASA-CASE-LAR-13111-1-CU] c 71 N86-20086
- COMPOSITE MATERIALS**  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c 17 N70-33288
- Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c 17 N70-38198
- Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c 17 N70-38490
- Unfired-ceramic flame-resistant insulation and method of making the same Patent  
[NASA-CASE-XMF-01030] c 18 N70-41583
- Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076
- Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c 18 N71-16124
- Flexible composite membrane Patent  
[NASA-CASE-XNP-08837] c 18 N71-16210
- Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMF-02964] c 14 N71-17659
- Method for producing fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-03925] c 18 N71-22894
- Solar cell matrix  
[NASA-CASE-NPO-11190] c 03 N71-34044
- Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c 15 N72-24522
- Method of making fiber composites  
[NASA-CASE-LEW-10424-2-2] c 18 N72-25539
- Thermal compensating structural member  
[NASA-CASE-MFS-20433] c 15 N72-28496
- Bearing material --- composite material with low friction surface for rolling or sliding contact  
[NASA-CASE-LEW-11930-1] c 24 N76-22309
- Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c 37 N76-22541
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MS-C-14331-1] c 27 N76-24405
- Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187
- Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c 24 N77-27188
- Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c 24 N78-15180
- High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302
- Molded composite pyro igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c 28 N78-24365
- Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916
- Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318
- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158
- Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388
- Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482
- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796

- Pre-stressed thermal protection systems  
[NASA-CASE-MSC-20254-1] c 16 N84-22601
- Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351
- Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380
- Thermal-stress-free fasteners  
[NASA-CASE-LAR-13325-1-SB] c 37 N86-20805
- Aminophenoxycyclophosphazene cured epoxy resins and the composites, laminates and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N86-21686
- COMPOSITE PROPELLANTS**  
Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090
- Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c 28 N80-28536
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119
- COMPOSITE STRUCTURES**  
Inflatable honeycomb Patent  
[NASA-CASE-XLA-00204] c 32 N70-36536
- Composite powerplant and shroud therefor Patent  
[NASA-CASE-XLA-01043] c 28 N71-10780
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170
- Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c 24 N78-10214
- Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c 24 N78-17149
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184
- Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c 44 N80-16452
- Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c 31 N81-25258
- Light weight fire resistant graphite composites  
[NASA-CASE-ARC-11615-1-SB] c 24 N85-28976
- Aminophenoxycyclophosphazene cured epoxy resins and the composites, laminates and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N86-21686
- Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630
- Light weight fire resistant graphite composites  
[NASA-CASE-ARC-11615-1-SB] c 24 N86-28131
- COMPOSITION (PROPERTY)**  
Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c 35 N76-16393
- COMPRESSED AIR**  
Valve actuator Patent  
[NASA-CASE-XHQ-01208] c 15 N70-35409
- COMPRESSIBILITY**  
Nozzle extraction process and handmeter for measuring handle  
[NASA-CASE-LAR-12147-1] c 31 N79-11246
- COMPRESSIBLE FLUIDS**  
Apparatus having coaxial capacitor structure for measuring fluid density Patent  
[NASA-CASE-XLE-00143] c 14 N70-36618
- Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c 14 N71-15600
- COMPRESSING**  
Refrigeration apparatus Patent  
[NASA-CASE-XNP-08877] c 15 N71-23025
- Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c 31 N74-18124
- COMPRESSION LOADS**  
Pressure transducer  
[NASA-CASE-NPO-10832] c 14 N72-21405
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379
- Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382
- Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081
- Deployable M-braced truss structure  
[NASA-CASE-LAR-13081-1] c 37 N86-32737
- COMPRESSION RATIO**  
Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c 37 N83-36483
- COMPRESSION TESTS**  
Compression test assembly  
[NASA-CASE-LAR-10440-1] c 14 N73-32323
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c 09 N74-19528
- Compression test apparatus  
[NASA-CASE-MSC-18723-1] c 35 N83-21312
- COMPRESSOR BLADES**  
Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515
- Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- COMPRESSOR ROTORS**  
Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366
- COMPRESSORS**  
Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c 33 N71-17610
- Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c 75 N76-17951
- Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c 35 N78-10428
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658
- Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N83-31897
- Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404
- Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N86-27467
- COMPUTATION**  
Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437
- Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c 04 N78-17031
- COMPUTER COMPONENTS**  
Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897
- Binary to binary coded decimal converter  
[NASA-CASE-GSC-12044-1] c 60 N78-17691
- Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839
- Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538
- Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1CU] c 60 N86-24224
- Convolver  
[NASA-CASE-NPO-16462-1CU] c 60 N86-24225
- COMPUTER DESIGN**  
Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751
- Massively parallel processor computer  
[NASA-CASE-GSC-12223-1] c 60 N83-25378
- Distributed multipoint memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342
- Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c 60 N85-21992
- COMPUTER GRAPHICS**  
System for quantizing graphic displays  
[NASA-CASE-NPO-10745] c 08 N72-22164
- COMPUTER NETWORKS**  
High-speed data link for moderate distances and noisy environments  
[NASA-CASE-NPO-14152-1] c 32 N80-18252
- Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
[NASA-CASE-KSC-11048-1] c 62 N81-24779
- Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428
- COMPUTER PROGRAMMING**  
Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917
- Priority interrupt system --- comprised of four registers  
[NASA-CASE-NPO-13067-1] c 60 N76-18800
- COMPUTER PROGRAMS**  
Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633
- Program for computer aided reliability estimation  
[NASA-CASE-NPO-13086-1] c 15 N73-12495
- Numerical computer peripheral interactive device with manual controls  
[NASA-CASE-NPO-11497] c 08 N73-25206
- COMPUTER STORAGE DEVICES**  
Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c 08 N71-12504
- Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505
- Pulse-type magnetic core memory element circuit with blocking oscillator feedback Patent  
[NASA-CASE-XGS-03303] c 08 N71-18595
- Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033
- Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c 07 N71-24624
- Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650
- Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-XNP-01466] c 10 N71-26434
- Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135
- Semiconductor-ferroelectric memory device  
[NASA-CASE-ERC-10307] c 08 N72-21198
- Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c 60 N76-21914
- Distributed multipoint memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342
- Method of and apparatus for generating an interstitial point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701
- COMPUTER SYSTEMS DESIGN**  
Adaptive voting computer system  
[NASA-CASE-MSC-13932-1] c 62 N74-14920
- Computer interface system  
[NASA-CASE-NPO-13428-1] c 60 N77-12721
- COMPUTER TECHNIQUES**  
Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245
- Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c 09 N77-27131
- Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421
- Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154
- COMPUTERIZED SIMULATION**  
Integrated time shared instrumentation display Patent  
[NASA-CASE-XLA-01952] c 08 N71-12507
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411
- Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c 74 N79-13855
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- COMPUTERS**  
Telemetry word forming unit  
[NASA-CASE-XNP-09225] c 09 N69-24333
- Data compression processor Patent  
[NASA-CASE-NPO-10068] c 08 N71-19288
- Communications link for computers  
[NASA-CASE-NPO-11161] c 08 N72-25207
- Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MSC-20258-1] c 60 N84-28492
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154
- CONCAVITY**  
Concave grating spectrometer Patent  
[NASA-CASE-XGS-01036] c 14 N70-40003
- CONCENTRATORS**  
Device for directionally controlling electromagnetic radiation Patent  
[NASA-CASE-XLE-01716] c 09 N70-40234
- Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c 44 N76-14602
- Three-dimensional tracking solar energy concentrator and method for making same  
[NASA-CASE-NPO-13736-1] c 44 N77-32583
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13817-1] c 44 N79-11471
- Solar cell module  
[NASA-CASE-NPO-14467-1] c 44 N79-31753

- Solar concentrator  
[NASA-CASE-MFS-23727-1] c 44 N80-14473
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518
- Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1] c 31 N85-20154
- Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1CU] c 35 N86-29174
- CONCENTRIC CYLINDERS**  
Flow resistivity instrument  
[NASA-CASE-LAR-13053-1] c 43 N83-29783
- CONCENTRIC SPHERES**  
Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319
- Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion  
[NASA-CASE-NPO-14596-3] c 31 N83-31896
- CONDENSATES**  
Apparatus for testing polymeric materials Patent  
[NASA-CASE-XNP-09699] c 06 N71-24607
- Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c 77 N75-20139
- CONDENSERS (LIQUEFIERS)**  
Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465
- Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c 77 N75-20139
- CONDENSING**  
Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- CONDUCTING FLUIDS**  
Multiducted electromagnetic pump Patent  
[NASA-CASE-NPO-10755] c 15 N71-27084
- Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686
- CONDUCTIVE HEAT TRANSFER**  
Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156
- Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439
- Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c 36 N77-25502
- Automatic thermal switch  
[NASA-CASE-GSC-12415-1] c 33 N82-24419
- CONDUCTORS**  
Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701
- Method for making conductors for ferrite memory arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-10994-1] c 24 N75-13032
- CONES**  
Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475
- CONFIGURATION MANAGEMENT**  
Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1SB] c 54 N86-22114
- CONFINEMENT**  
Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c 11 N73-12265
- CONICAL BODIES**  
Conical valve plug Patent  
[NASA-CASE-XLE-00715] c 15 N70-34859
- Conical reflector antenna  
[NASA-CASE-NPO-10303] c 07 N72-22127
- Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130
- CONICAL SCANNING**  
Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c 32 N79-13214
- CONICAL SHELLS**  
Device for determining the accuracy of the flare on a flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785
- Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c 03 N70-41580
- Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-22722
- CONJUGATES**  
Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c 32 N79-24210
- CONNECTORS**  
Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539
- Quick release connector Patent  
[NASA-CASE-XLA-01141] c 15 N71-13789
- Flared tube strainer  
[NASA-CASE-XLA-05056] c 15 N72-11389
- Process for making RF shielded cable connector assemblies and the products formed thereby  
[NASA-CASE-GSC-11215-1] c 09 N73-28083
- Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225
- Clamp-mount device  
[NASA-CASE-MFS-25510-1] c 37 N84-16560
- Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605
- Connection system --- insuring against loss of a tool component without using multiple tethers  
[NASA-CASE-MSC-20319-1] c 37 N85-21649
- CONSCIOUSNESS**  
EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MSC-13282-1] c 05 N71-24729
- CONSISTENCY**  
Constant-output atomizer --- Inhalation therapy and aerosol research  
[NASA-CASE-MFS-25631-1] c 34 N84-12406
- CONSOLES**  
Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310
- CONSTANTS**  
Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c 35 N77-18417
- CONSTRAINTS**  
Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694
- Cable restraint  
[NASA-CASE-LAR-10129-1] c 15 N73-25512
- Restraint system for ergometer  
[NASA-CASE-MSC-21046-1] c 14 N73-27377
- Reeling system  
[NASA-CASE-LAR-10129-2] c 37 N74-20063
- Restraining mechanism  
[NASA-CASE-MSC-13054] c 54 N78-17677
- Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662
- CONSTRUCTION MATERIALS**  
Foldable construction block  
[NASA-CASE-MSC-12233-1] c 15 N72-25454
- Foldable construction block  
[NASA-CASE-MSC-12233-2] c 32 N73-13921
- CONTACT POTENTIALS**  
Ionospheric battery Patent  
[NASA-CASE-XGS-01593] c 03 N70-35408
- CONTAINERLESS MELTS**  
Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c 76 N77-32919
- Production of ultrapure amorphous metals utilizing acoustic cooling  
[NASA-CASE-NPO-15658-1] c 26 N83-19890
- Gas levitator having fixed levitation node for containerless processing  
[NASA-CASE-MFS-25509-1] c 35 N83-24828
- Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650
- Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N86-21684
- Apparatus and furnace for containerless processing of high temperature materials in space  
[NASA-CASE-MFS-28087-1] c 35 N86-23899
- Apparatus for production of ultrapure amorphous metals utilizing acoustic cooling  
[NASA-CASE-NPO-15658-1] c 26 N86-32551
- CONTAINERS**  
Fluid containers and resealable septum therefor Patent  
[NASA-CASE-NPO-10123] c 15 N71-24835
- Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910
- Apparatus for detecting the amount of material in a resonant cavity container Patent  
[NASA-CASE-XNP-02500] c 18 N71-27397
- CONTAINMENT**  
Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991
- CONTAMINANTS**  
Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089
- Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279
- CONTAMINATION**  
Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871
- Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922
- Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372
- Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c 14 N72-25413
- Biocontamination and particulate detection system  
[NASA-CASE-NPO-13953-1] c 35 N79-28527
- CONTINUOUS RADIATION**  
CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c 39 N78-15512
- Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c 35 N79-10390
- Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c 04 N84-27713
- CONTINUOUS WAVE LASERS**  
High power laser apparatus and system  
[NASA-CASE-XLE-2529-2] c 36 N75-27364
- Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c 36 N77-19416
- Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589
- Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943
- CONTINUOUS WAVE RADAR**  
Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680
- FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264
- Method and apparatus for measuring distance  
[NASA-CASE-MSC-20912-1] c 32 N86-24879
- CONTOURS**  
Contour surveying system Patent  
[NASA-CASE-XLA-08646] c 14 N71-17586
- Contourograph system for monitoring electrocardiograms  
[NASA-CASE-MSC-13407-1] c 10 N72-20225
- Variable contour securing system  
[NASA-CASE-MSC-16270-1] c 37 N78-27423
- Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c 74 N78-27904
- Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724
- Contour measurement system  
[NASA-CASE-MFS-23726-1] c 43 N79-26439
- Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388
- Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MSC-18422-1] c 37 N82-16408
- Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711
- CONTROL**  
Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191
- Apparatus for testing a pressure responsive instrument Patent  
[NASA-CASE-XMF-04134] c 14 N71-23755
- Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175
- Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395
- Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538
- Television camera video level control system  
[NASA-CASE-MSC-18578-1] c 32 N85-21427
- CONTROL BOARDS**  
Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
[NASA-CASE-XLE-00787] c 14 N71-21090
- CONTROL DATA (COMPUTERS)**  
Computer interface system  
[NASA-CASE-NPO-13428-1] c 60 N77-12721
- CONTROL EQUIPMENT**  
Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772
- Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c 08 N71-19687
- Altitude controls for VTOL aircraft Patent  
[NASA-CASE-XAC-08972] c 02 N71-20570
- Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809
- Controlled release device Patent  
[NASA-CASE-XKS-03338] c 15 N71-24043



- Dual polarity full wave dc motor drive Patent  
[NASA-CASE-XNP-07477] c 09 N71-26092
- Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-XNP-01466] c 10 N71-26434
- Fluid jet amplifier Patent  
[NASA-CASE-XLE-09341] c 12 N71-28741
- System for controlling the operation of a variable signal device  
[NASA-CASE-NPO-11064] c 07 N72-11150
- Solid state remote circuit selector switch  
[NASA-CASE-LEW-10387] c 09 N72-22201
- Synchronous orbit battery cyclor  
[NASA-CASE-GSC-11211-1] c 03 N72-25020
- Infinite range electronics gain control circuit  
[NASA-CASE-GSC-10786-1] c 10 N72-28241
- Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c 14 N73-25463
- Digital controller for a Baum folding machine --- providing automatic counting and machine shutoff  
[NASA-CASE-LAR-10688-1] c 37 N74-21056
- Flow control valve --- for high temperature fluids  
[NASA-CASE-NPO-11951-1] c 37 N74-21065
- Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041
- Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c 54 N77-32721
- Power factor control system for AC induction motors  
[NASA-CASE-MFS-23280-1] c 33 N78-10376
- Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384
- Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913
- Illumination control apparatus for compensating solar light  
[NASA-CASE-KSC-11010-1] c 74 N79-12890
- Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c 35 N80-28686
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718
- Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279
- Electronic system for high power load control --- solar arrays  
[NASA-CASE-NPO-15358-1] c 33 N83-27126
- Pulsed thyristor trigger control circuit  
[NASA-CASE-MFS-25616-1] c 33 N84-16455
- Apparatus and method of capturing an orbiting satellite  
[NASA-CASE-MSC-20979-1] c 37 N86-19614
- Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- CONTROL ROCKETS**  
Decomposition unit Patent  
[NASA-CASE-XMS-00583] c 28 N70-38504
- CONTROL RODS**  
Null device for hand controller Patent  
[NASA-CASE-XLA-01808] c 15 N71-20740
- CONTROL SIMULATION**  
Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806
- CONTROL STABILITY**  
Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115
- Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493
- CONTROL SURFACES**  
Conical valve plug Patent  
[NASA-CASE-XLE-00715] c 15 N70-34859
- Attitude control for spacecraft Patent  
[NASA-CASE-XNP-02982] c 31 N70-41855
- Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c 08 N79-14108
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968
- Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c 37 N81-15363
- CONTROL SYSTEMS DESIGN**  
Reactant pressure differential control for fuel cell gases  
[NASA-CASE-MSC-20127-2] c 37 N85-34403
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- CONTROL UNITS (COMPUTERS)**  
Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633
- CONTROL VALVES**  
Electromechanical actuator  
[NASA-CASE-XNP-05975] c 15 N69-23185
- Full flow with shut off and selective drainage control valve Patent application  
[NASA-CASE-ERC-10208] c 15 N70-10867
- Conical valve plug Patent  
[NASA-CASE-XLE-00715] c 15 N70-34859
- Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654
- Electrohydrodynamic control valve Patent  
[NASA-CASE-NPO-10416] c 12 N71-27332
- Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432
- Dual stage check valve  
[NASA-CASE-MSC-13587-1] c 15 N73-30459
- Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c 02 N74-20646
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185
- Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c 37 N77-28487
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c 37 N78-25426
- Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468
- Quartz ball valve  
[NASA-CASE-NPO-14473-1] c 37 N80-23654
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c 37 N81-17433
- Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483
- Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- Slow opening valve --- valve design for shuttle portable oxygen system  
[NASA-CASE-MSC-20112-1] c 37 N85-20338
- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N86-19611
- Advanced vapor supply manifold  
[NASA-CASE-LAR-13259-1] c 37 N86-20800
- Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589
- Monogroove cold plate --- heat-pipe exchanger for space applications  
[NASA-CASE-MSC-20946-1] c 34 N86-32661
- CONTROLLED ATMOSPHERES**  
Electrical connector Patent Application  
[NASA-CASE-MFS-14741] c 09 N70-20737
- High voltage pulse generator Patent  
[NASA-CASE-MSC-12178-1] c 09 N71-13518
- Exposure system for animals Patent  
[NASA-CASE-XAC-05333] c 11 N71-22875
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- CONTROLLERS**  
Three axis controller Patent  
[NASA-CASE-XFR-00181] c 21 N70-33279
- Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073
- Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255
- Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c 08 N74-10942
- Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c 33 N78-32340
- Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432
- Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352
- Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360
- Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975
- Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661
- Fluidic momentum controller  
[NASA-CASE-MSC-20906-1] c 18 N86-19344
- Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1SB] c 54 N86-22114
- Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288
- CONVECTION**  
Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968
- CONVECTIVE FLOW**  
Geysering inhibitor for vertical cryogenic transfer pipe  
[NASA-CASE-KSC-10615] c 15 N73-12486
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417
- CONVECTIVE HEAT TRANSFER**  
Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c 35 N74-22095
- CONVERGENCE**  
Shock wave convergence apparatus  
[NASA-CASE-MFS-20890] c 14 N72-22439
- CONVERGENT NOZZLES**  
Nozzle extraction process and handlemeter for measuring handle  
[NASA-CASE-LAR-12147-1] c 31 N79-11246
- CONVERGENT-DIVERGENT NOZZLES**  
Gimbaled, partially submerged rocket nozzle Patent  
[NASA-CASE-XMF-01544] c 28 N70-34162
- Combustion chamber Patent  
[NASA-CASE-XLE-04857] c 28 N71-23968
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392
- Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088
- CONVERSION**  
Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547
- CONVERTERS**  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391
- CONVEYORS**  
System and method for refurbishing and processing parachutes --- monorial conveyor system  
[NASA-CASE-KSC-11042-2] c 02 N81-26073
- Method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c 09 N82-29330
- Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187
- Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515
- Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722
- CONVOLUTION INTEGRALS**  
Convolver  
[NASA-CASE-NPO-16462-1CU] c 60 N86-24225
- COOLANTS**  
Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182
- COOLERS**  
Stirling cycle cryogenic cooler --- magnetically suspended pistons  
[NASA-CASE-GSC-12697-1] c 31 N82-11312
- COOLING**  
Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486
- Voltage regulator with plural parallel power source sections Patent  
[NASA-CASE-GSC-10891-1] c 10 N71-26626
- Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440
- Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c 36 N77-25502
- Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N83-17628
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221
- Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560
- Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577
- Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410
- Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568
- COOLING SYSTEMS**  
Automatic thermal switch Patent  
[NASA-CASE-XNP-03796] c 23 N71-15467
- Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598
- Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114-2] c 09 N71-24807
- Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654
- Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046
- Heat conductive resiliently compressible structure for space electronics package modules Patent  
[NASA-CASE-MSC-12389] c 33 N71-29052
- Method and device for cooling Patent  
[NASA-CASE-HQN-00938] c 33 N71-29053
- Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c 33 N71-29152

Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948

Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c 34 N74-23066

Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c 33 N75-30430

Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c 20 N76-14191

Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c 34 N77-19353

Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106

Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467

Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c 31 N78-17237

Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c 31 N78-25256

Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721

Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c 34 N79-13288

Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c 34 N79-20336

Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579

Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519

Cooling system for high speed aircraft  
[NASA-CASE-LAR-12406-1] c 05 N81-26114

Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c 32 N83-27085

Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324

Radiative cooler --- spacecraft radiators  
[NASA-CASE-NPO-15485-1] c 34 N84-22903

Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577

High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179

Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182

Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286

Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433

Monogroove cold plate --- heat-pipe exchanger for space applications  
[NASA-CASE-MS-C-20946-1] c 34 N86-32661

**COORDINATES**

Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907

Lightning tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110

Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056

**COPOLYMERIZATION**

Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-1] c 27 N84-27885

Chemical control of nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-2] c 25 N85-28982

High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1-SB] c 24 N85-30033

Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560

Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N86-26435

**COPOLYMERS**

Method of producing alternating ether siloxane copolymers Patent  
[NASA-CASE-XMF-02584] c 06 N71-20905

Dicyanooctylene polymers Patent  
[NASA-CASE-XNP-03250] c 06 N71-23500

Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MS-C-14903-3] c 27 N80-24438

Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187

Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350

Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351

Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144

High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1-SB] c 24 N85-30033

Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380

Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841

Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N86-26435

Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526

**COPPER**

Method for etching copper Patent  
[NASA-CASE-XGS-06306] c 17 N71-16044

Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c 17 N71-25903

Brazing alloy composition  
[NASA-CASE-XMF-06053] c 26 N75-27126

Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469

Metal (2) 4,4',4'',4''' phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281

**COPPER ALLOYS**

Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c 26 N77-20201

Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015

**COPPER COMPOUNDS**

Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027

Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440

Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127

**COPPER FLUORIDES**

Preparation of high purity copper fluoride  
[NASA-CASE-LEW-10794-1] c 06 N72-17093

**COPPER OXIDES**

Textured carbon surfaces on copper  
[NASA-CASE-LEW-14130-1] c 31 N85-20156

Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587

**CORDAGE**

Method of forming a root cord restrained convolute section  
[NASA-CASE-MS-C-12398] c 05 N72-20098

**CORE STORAGE**

Semiconductor-ferroelectric memory device  
[NASA-CASE-ERC-10307] c 08 N72-21198

**CORES**

Method of making rolling element bearings  
[NASA-CASE-LEW-11087-2] c 37 N74-15128

Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392

Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296

**CORK (MATERIALS)**

Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388

**CORRECTION**

Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978

**CORRELATION**

Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968

**CORRELATION DETECTION**

Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c 33 N75-26243

Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359

**CORRELATORS**

Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723

Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267

Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308

Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c 32 N83-13323

**CORROSION**

Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039

**CORROSION PREVENTION**

Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c 15 N71-16075

Method of inhibiting stress corrosion cracks in titanium alloys Patent  
[NASA-CASE-NPO-10271] c 17 N71-16393

Controlled glass bead peening Patent  
[NASA-CASE-XLA-07390] c 15 N71-18616

Corrosion resistant beryllium Patent  
[NASA-CASE-LEW-10327] c 17 N71-33408

Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c 24 N76-14203

Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579

Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441

Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596

Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N84-20670

Oxidation protecting coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N86-26434

Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550

**CORROSION RESISTANCE**

High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c 17 N71-15644

Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c 18 N71-15688

High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c 17 N71-18025

Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078

Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482

Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188

Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371

Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177

Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597

Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005

**CORRUGATED PLATES**

Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296

**CORRUGATING**

Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c 32 N80-29539

Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296

Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450

**COSINE SERIES**

Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-10503-1] c 09 N72-21248

Function generator for synthesizing complex vibration mode patterns  
[NASA-CASE-LAR-10310-1] c 10 N73-20253

**COSMIC DUST**

Cosmic dust sensor  
[NASA-CASE-GSC-10503-1] c 14 N72-20381

Cosmic dust or other similar outer space particles impact location detector  
[NASA-CASE-GSC-11291-1] c 25 N72-33696

Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331

Cosmic dust analyzer  
[NASA-CASE-MS-C-13802-2] c 35 N76-15431

**COST ANALYSIS**

Low cost solar energy collection system  
[NASA-CASE-NPO-13579-1] c 44 N78-17460

**COST EFFECTIVENESS**

Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589



- Aerobraking orbital transfer vehicle  
[NASA-CASE-MSC-20921-1] c 18 N86-20471
- COUCHES**
- Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152
- Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c 15 N70-35679
- Articulated multiple couch assembly Patent  
[NASA-CASE-MSC-11253] c 05 N71-12343
- Collapsible Apollo couch  
[NASA-CASE-MSC-13140] c 05 N72-11085
- COULOMETERS**
- Electrochemical coulometer and method of forming same Patent  
[NASA-CASE-XGS-05434] c 03 N71-20491
- Coulometer and third electrode battery charging circuit Patent  
[NASA-CASE-GSC-10487-1] c 03 N71-24719
- State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596
- COUNTERBALANCES**
- Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629
- COUNTERS**
- Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137
- Electronic strain-level counter  
[NASA-CASE-LAR-10756-1] c 32 N73-26910
- Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073
- Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706
- Film advance indicator  
[NASA-CASE-LAR-12474-1] c 35 N82-26628
- Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c 35 N82-28604
- COUNTING CIRCUITS**
- Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432
- Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463
- Relay binary circuit Patent  
[NASA-CASE-XMF-00421] c 09 N70-34502
- Reversible ring counter employing cascaded single SCR stages Patent  
[NASA-CASE-XGS-01473] c 09 N71-10673
- Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent  
[NASA-CASE-XLE-01246] c 14 N71-10797
- Magnetic counter Patent  
[NASA-CASE-XNP-08836] c 09 N71-12515
- Synchronous counter Patent  
[NASA-CASE-XGS-02440] c 08 N71-19432
- Digital cardiostachometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896
- Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897
- Noninterruptable digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891
- Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c 33 N76-16331
- Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706
- COUPLING**
- Coupling for linear shaped charge Patent  
[NASA-CASE-XLA-00189] c 33 N70-36846
- Expandable support means  
[NASA-CASE-NPO-11059] c 15 N72-17454
- Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568
- Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319
- Coupling an induction motor type generator to ac power lines --- making windmill generators compatible with public power lines  
[NASA-CASE-MFS-25302-2] c 33 N84-33660
- COUPLING CIRCUITS**
- Flipflop interrogator and bi-polar current driver Patent  
[NASA-CASE-XGS-03058] c 10 N71-19547
- Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233
- Phase modulator Patent  
[NASA-CASE-MSC-13201-1] c 07 N71-28429
- Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430
- Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MFS-21660-1] c 35 N74-21017

- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520
- Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422
- COUPLINGS**
- Coupling device  
[NASA-CASE-XMS-07846-1] c 09 N69-21927
- Tubular coupling having frangible connecting means  
[NASA-CASE-XLA-02854] c 15 N69-27490
- Quick release separation mechanism Patent  
[NASA-CASE-XLA-01441] c 15 N70-41679
- Indexed keyed connection Patent  
[NASA-CASE-XMS-02532] c 15 N70-41808
- Quick attach and release fluid coupling assembly Patent  
[NASA-CASE-XKS-01985] c 15 N71-10782
- Ratchet mechanism Patent  
[NASA-CASE-MFS-12805] c 15 N71-17805
- Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489
- Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903
- Isolation coupling arrangement for a torque measuring system  
[NASA-CASE-XLA-04897] c 15 N72-22482
- Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c 33 N75-30430
- Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366
- Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772
- Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c 37 N80-14398
- Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c 37 N81-14320
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605
- Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673
- Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605
- Connection system --- insuring against loss of a tool component without using multiple tethers  
[NASA-CASE-MSC-20319-1] c 37 N85-21649
- Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N85-29290
- Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N86-31630
- COVARIANCE**
- Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154
- COVERINGS**
- Apparatus for ejection of an instrument cover  
[NASA-CASE-XMF-04132] c 15 N69-27502
- Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394
- COWLINGS**
- Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293
- CRACKING (FRACTURING)**
- Method of inhibiting stress corrosion cracks in titanium alloys Patent  
[NASA-CASE-NPO-10271] c 17 N71-16393
- TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c 39 N78-16387
- CRACKS**
- Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736
- CRASH LANDING**
- Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140
- CREEP RUPTURE STRENGTH**
- Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent  
[NASA-CASE-XLE-02082] c 17 N71-16026
- Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N86-26414
- CREEP TESTS**
- Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375
- CRITICAL EXPERIMENTS**
- Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372
- CRITICAL TEMPERATURE**
- Stable superconducting magnet --- high current levels below critical temperature  
[NASA-CASE-XMF-05373-1] c 33 N79-21264
- CROSS CORRELATION**
- Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c 38 N78-17395

- Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- CROSS FLOW**
- Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968
- Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194
- CROSS POLARIZATION**
- Adaptive polarization separation  
[NASA-CASE-LAR-12196-1] c 33 N81-26358
- CROSSED FIELDS**
- Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c 25 N70-33267
- Energy conversion apparatus Patent  
[NASA-CASE-XLE-00212] c 03 N70-34134
- Crossed-field MHD plasma generator/accelerator Patent  
[NASA-CASE-XLA-03374] c 25 N71-15562
- CROSSLINKING**
- Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c 27 N78-15276
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232
- In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c 44 N79-25481
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307
- Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259
- The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c 27 N81-24257
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160
- Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188
- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392
- Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950
- Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040
- Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-1] c 27 N84-22747
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-1] c 27 N85-20123
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352
- Chemical control of nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-2] c 25 N85-28982
- Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N86-24840
- Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416
- Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N86-25477
- Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N86-25478
- Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N86-26435

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## CRUCIFORM WINGS

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[NASA-CASE-XNP-03835] c 06 N71-23499  
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[NASA-CASE-NPO-14542-1] c 25 N82-23282

## CRUSTAL FRACTURES

System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603

## CRYOGENIC COOLING

Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c 32 N80-32605

Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287

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[NASA-CASE-GSC-12697-1] c 31 N82-11312

Stirling cycle cryogenic cooler  
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Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N86-27467

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Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190

Piping arrangement through a double chamber structure  
[NASA-CASE-XNP-08882] c 15 N69-39935

Method and apparatus for cryogenic wire stripping Patent  
[NASA-CASE-MFS-10340] c 15 N71-17628

Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725

Valving device for automatic refilling in cryogenic liquid systems  
[NASA-CASE-NPO-11177] c 15 N72-17453

Dual stage check valve  
[NASA-CASE-MSC-13587-1] c 15 N73-30459

Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c 20 N75-24837

Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229

Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c 35 N77-22450

Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c 31 N78-25256

System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694

Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549

Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c 33 N82-11357

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[NASA-CASE-MFS-25678-1] c 37 N84-11497

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[NASA-CASE-GSC-12799-1] c 31 N85-21404

Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26388

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[NASA-CASE-XLE-00345] c 15 N70-38020

Cryogenic storage system Patent  
[NASA-CASE-XMS-04390] c 31 N70-41871

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[NASA-CASE-XLA-01967] c 31 N70-42015

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[NASA-CASE-XLE-03803-2] c 15 N71-17651

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[NASA-CASE-XLE-04222] c 23 N71-22881

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[NASA-CASE-MFS-14023] c 33 N71-25351

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[NASA-CASE-XMF-05046] c 33 N71-28892

Zero gravity shadow shield aligner  
[NASA-CASE-KSC-10622-1] c 31 N72-21893

Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093

Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225

Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c 37 N80-18393

Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841

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Cryogenic apparatus for measuring the intensity of magnetic fields  
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Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c 15 N70-34247

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[NASA-CASE-XLE-00715] c 15 N70-34859

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[NASA-CASE-XLE-00397] c 15 N70-36492

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[NASA-CASE-NPO-10250] c 23 N71-16212

Superconducting alternator Patent  
[NASA-CASE-XLE-02823] c 09 N71-23443

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[NASA-CASE-XLE-04503] c 14 N71-24864

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[NASA-CASE-KSC-10615] c 15 N73-12486

Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c 37 N74-27904

Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c 35 N77-21393

## CRYOGENIC GYROSCOPES

Cryogenic gyroscope housing --- with annular disks for gas spin-up  
[NASA-CASE-MFS-21136-1] c 35 N74-18323

## CRYOGENIC MAGNETS

Superconducting alternator  
[NASA-CASE-XLE-02824] c 03 N69-39890

## CRYOGENIC ROCKET PROPELLANTS

Quick attach and release fluid coupling assembly Patent  
[NASA-CASE-XKS-01985] c 15 N71-10782

Hot wire liquid level detector for cryogenic fluids Patent  
[NASA-CASE-XLE-00454] c 23 N71-17802

Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042

## CRYOGENIC STORAGE

Insulation system Patent  
[NASA-CASE-XLE-02647] c 18 N71-23658

Filament wound container Patent  
[NASA-CASE-XLE-03803] c 15 N71-23816

## CRYOGENIC WIND TUNNELS

Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c 37 N82-24490

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Low temperature aluminum alloy Patent  
[NASA-CASE-XMF-02786] c 17 N71-20743

Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654

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[NASA-CASE-MFS-23274-1] c 33 N78-13320

Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372

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[NASA-CASE-LEW-12542-3] c 26 N80-32484

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[NASA-CASE-MSC-18255-1] c 74 N80-33210

Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c 27 N81-24258

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Ultraviolet filter  
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[NASA-CASE-NPO-14513-1] c 35 N81-14287

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Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402

## CRYSTAL DEFECTS

Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c 76 N79-11920

Method for growing low defect, high purity crystalline layers  
[NASA-CASE-NPO-15813-2] c 76 N85-30933

## CRYSTAL FILTERS

Infrared tunable laser  
[NASA-CASE-ARC-10463-1] c 09 N73-32111

Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c 74 N79-14891

## CRYSTAL GROWTH

Apparatus for producing high purity silicon carbide crystals Patent  
[NASA-CASE-XLA-02057] c 26 N70-40015

Method of producing crystalline materials  
[NASA-CASE-NPO-10440] c 15 N72-21466

Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043

Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c 76 N76-25049

Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c 76 N77-32919

Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c 35 N78-17359

Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c 76 N79-11920

Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798

Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c 44 N80-24741

Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c 76 N80-32244

Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c 76 N80-32245

Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389

Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633

Controlled in situ etch-back  
[NASA-CASE-NPO-15625-1] c 76 N83-20789

Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650

Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968

Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113

Total immersion crystal growth  
[NASA-CASE-NPO-15800-2] c 76 N85-22178

Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800

Low defect, high purity crystalline layers grown by selective deposition  
[NASA-CASE-NPO-15813-1] c 76 N85-30922

Method for growing low defect, high purity crystalline layers  
[NASA-CASE-NPO-15813-2] c 76 N85-30933

Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1-CU] c 35 N86-26598

## CRYSTAL LATTICES

Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950

Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730

## CRYSTAL OPTICS

Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c 74 N82-30071

## CRYSTAL OSCILLATORS

Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c 14 N71-17701

Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559

Automatic oscillator frequency control system  
[NASA-CASE-GSC-12804-1] c 33 N86-20668

## CRYSTAL RECTIFIERS

- Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c 10 N71-26531
- CRYSTAL STRUCTURE**  
Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187
- CRYSTALLINITY**  
Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158  
Method for growing low defect, high purity crystalline layers  
[NASA-CASE-NPO-15813-2] c 76 N85-30933
- CRYSTALLIZATION**  
Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c 76 N77-32919  
Total immersion crystal growth  
[NASA-CASE-NPO-15800-2] c 76 N85-22178
- CRYSTALS**  
Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904  
Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c 76 N80-18951  
Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730  
Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083
- CUBIC LATTICES**  
Stabilized lanthanum sulphur compounds --- thermoelectric materials  
[NASA-CASE-NPO-16135-1] c 25 N83-24572
- CUES**  
Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806
- CUFFS**  
Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c 52 N82-11770  
Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744
- CULTURE TECHNIQUES**  
Variable angle tube holder  
[NASA-CASE-LAR-10507-1] c 11 N72-25284  
Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c 51 N75-13502  
Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c 35 N75-27330  
Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698  
Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045  
Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849  
Flow through bacteria detection system  
[NASA-CASE-LAR-12871-1] c 35 N85-29218  
Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227
- CURIE TEMPERATURE**  
Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- CURING**  
Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260  
Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215  
Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c 27 N81-17260  
Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039  
Fluoroether modified epoxy composites  
[NASA-CASE-ARC-11418-1] c 24 N84-11213  
Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-3] c 24 N84-16262  
Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-1] c 27 N84-27885  
Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350

- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351
- Chemical control of nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-2] c 25 N85-28982  
Metal (2,4,4',4'') phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281  
Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380  
High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590  
Ethyne and substituted ethyne-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675  
Aminophenoxycyclotriphosphazene cured epoxy resins and the composites, laminates and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N86-21686  
Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N86-32570
- CURRENT AMPLIFIERS**  
Multi-channel temperature measurement amplification system --- solar heating systems  
[NASA-CASE-MFS-23775-1] c 44 N82-16474  
Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421  
A dc to dc converter  
[NASA-CASE-MFS-25430-1] c 33 N84-16453
- CURRENT DENSITY**  
Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500  
Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c 17 N73-24569  
Stable superconducting magnet --- high current levels below critical temperature  
[NASA-CASE-XMF-05373-1] c 33 N79-21264  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524
- CURRENT DISTRIBUTION**  
Connector - Electrical  
[NASA-CASE-XLA-01288] c 09 N69-21470  
Electrostatic ion rocket engine Patent  
[NASA-CASE-XLE-02066] c 28 N71-15661  
Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c 10 N71-18724  
Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271  
Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
[NASA-CASE-XER-11046-2] c 33 N74-22864
- CURRENT REGULATORS**  
Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c 09 N69-24318  
Baseline stabilization system for ionization detector Patent  
[NASA-CASE-XNP-03128] c 10 N70-41991  
Magnetic core current steering commutator Patent  
[NASA-CASE-NPO-10201] c 08 N71-18694  
Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c 09 N71-23316  
Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800  
Drive circuit for minimizing power consumption in inductive load Patent  
[NASA-CASE-NPO-10716] c 09 N71-24892  
Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c 10 N71-26531  
Current regulating voltage divider  
[NASA-CASE-MFS-20935] c 09 N71-34212  
Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225  
Inrush current limiter  
[NASA-CASE-GSC-11789-1] c 33 N77-14333  
Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257  
Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c 33 N81-12330  
Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360  
Electronic system for high power load control --- solar arrays  
[NASA-CASE-NPO-15358-1] c 33 N83-27126
- CURVATURE**  
Spin forming tubular elbows Patent  
[NASA-CASE-XMF-01083] c 15 N71-22723

- Two degree inverted flexure  
[NASA-CASE-ARC-10345-1] c 15 N73-12488
- CURVE FITTING**  
Voltage-current characteristic simulator Patent  
[NASA-CASE-XMS-01554] c 10 N71-10578
- CURVED PANELS**  
Method and apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917] c 15 N71-15597  
Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436  
Roll-up solar array Patent  
[NASA-CASE-NPO-10188] c 03 N71-20273  
Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836  
Variable contour securing system  
[NASA-CASE-MSC-16270-1] c 37 N78-27423
- CUSHIONS**  
Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
[NASA-CASE-LAR-12149-2] c 09 N79-31228  
Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394
- CUTTERS**  
Aligning and positioning device Patent  
[NASA-CASE-XMS-04178] c 15 N71-22798  
Weld preparation machine Patent  
[NASA-CASE-XKS-07953] c 15 N71-26134  
Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485  
Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c 37 N74-25968  
Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c 37 N74-27905  
Ophthalmic liquefaction pump  
[NASA-CASE-LEW-12051-1] c 52 N75-33640  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443  
System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c 37 N80-29703  
Open ended tubing cutters  
[NASA-CASE-MSC-18538-1] c 37 N82-26672  
Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085  
Cutting head for ultrasonic lithotripsy  
[NASA-CASE-GSC-12944-1] c 52 N86-19885
- CUTTING**  
Ellipsograph for pantograph Patent  
[NASA-CASE-XLA-03102] c 14 N71-21079  
Precision alignment apparatus for cutting a workpiece  
[NASA-CASE-LAR-11658-1] c 37 N77-14478  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992  
Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085
- CYANATES**  
Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116
- CYANO COMPOUNDS**  
Process for preparing phthalocyanine polymers  
[NASA-CASE-ARC-11511-1] c 23 N84-16259
- CYCLES**  
Pneumatic system for controlling and actuating pneumatic cyclic devices  
[NASA-CASE-XMS-04843] c 03 N69-21469  
Feedback shift register with states decomposed into cycles of equal length  
[NASA-CASE-NPO-11082] c 08 N72-22167
- CYCLIC ACCELERATORS**  
Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c 37 N77-19458
- CYCLIC COMPOUNDS**  
Carboranyl cyclotriphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389  
Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- CYCLIC HYDROCARBONS**  
Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572  
Synthesis of 2,4,8,10-tetroxaspiro[5.5]undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187
- CYCLIC LOADS**  
Automatic fatigue test temperature programmer Patent  
[NASA-CASE-XLA-02059] c 33 N71-24276  
Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877  
Material fatigue testing system  
[NASA-CASE-MFS-20673] c 14 N73-20476  
Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N86-32770

**CYCLOTRON RADIATION**

Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c 25 N78-27226

**CYCLOTRON RESONANCE**

Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163

**CYCLOTRON RESONANCE DEVICES**

Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163  
Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952

**CYLINDERS**

Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-1] c 37 N85-29289

**CYLINDRICAL ANTENNAS**

Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c 32 N76-18295

**CYLINDRICAL BODIES**

Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009  
Aerodynamic side-force alleviator means  
[NASA-CASE-LAR-12326-1] c 02 N81-14968

**CYLINDRICAL CHAMBERS**

Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091

**CYLINDRICAL SHELLS**

Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797

**CYSTS**

Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751

**CZOCHELSKI METHOD**

Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105

**D****DAMAGE**

Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c 24 N83-13172

**DAMPERS (VALVES)**

Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490

**DAMPING**

Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295  
Slosh suppressing device and method Patent  
[NASA-CASE-XMF-00658] c 12 N70-38997  
Attitude control and damping system for spacecraft Patent  
[NASA-CASE-XLA-02551] c 21 N71-21708  
Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694  
Nutation damper  
[NASA-CASE-GSC-11205-1] c 15 N73-25513  
Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c 10 N73-26228  
Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913  
Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305  
Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788

**DATA ACQUISITION**

Analog-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c 08 N70-40125  
Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c 30 N71-16090  
Analog signal integration and reconstruction system Patent  
[NASA-CASE-NPO-10344] c 10 N71-26544  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255  
Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854  
Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724

**DATA COLLECTION PLATFORMS**

Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c 15 N75-13007

**DATA COMPRESSION**

Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506  
Data compression processor Patent  
[NASA-CASE-NPO-10068] c 08 N71-19288  
Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c 08 N71-19435  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171  
Data compression system  
[NASA-CASE-NPO-11243] c 07 N72-20154  
Gated compressor, distortionless signal limiter  
[NASA-CASE-NPO-11820-1] c 32 N74-19788  
Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c 32 N77-12240  
Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328

**DATA CONVERTERS**

Logarithmic converter Patent  
[NASA-CASE-XLA-00471] c 08 N70-34778  
Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907  
Analog Signal to Discrete Time Interval Converter (ASDTIC)  
[NASA-CASE-ERC-10048] c 09 N72-25251  
High speed direct binary to binary coded decimal converter and scaler  
[NASA-CASE-KSC-10595] c 08 N73-12176  
Image data rate converter having a drum with a fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c 35 N74-11283  
Electronic analog divider  
[NASA-CASE-LEW-11881-1] c 33 N77-17354  
Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570

**DATA CORRELATION**

Instrument for determining coincidence and elapse time between independent sources of random sequential events  
[NASA-CASE-LAR-12531-1] c 35 N83-29651  
Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154

**DATA LINKS**

Multichannel telemetry system  
[NASA-CASE-NPO-11572] c 07 N73-16121  
Automated attendance accounting system  
[NASA-CASE-NPO-11456] c 08 N73-26176  
Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NPO-13422-1] c 60 N76-14818  
Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c 74 N76-18913

**DATA MANAGEMENT**

Selective data segment monitoring system --- using shift registers  
[NASA-CASE-ARC-10899-1] c 60 N77-19760

**DATA PROCESSING**

Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421  
Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255  
Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739  
Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
[NASA-CASE-XNP-03623] c 09 N73-28084  
Image data rate converter having a drum with a fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c 35 N74-11283  
Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c 32 N77-32342  
Interactive color display for multispectral imagery using correlation clustering  
[NASA-CASE-MSC-16253-1] c 32 N79-20297  
High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814  
Processing circuit with asymmetry corrector and convolutional encoder for digital data  
[NASA-CASE-MSC-20187-1] c 33 N85-20249  
LDV multiplexer interface  
[NASA-CASE-ARC-11536-1] c 33 N85-30202

**DATA PROCESSING EQUIPMENT**

Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494

Demodulation system Patent  
[NASA-CASE-XAC-04030] c 10 N71-19472  
Rate augmented digital to analog converter Patent  
[NASA-CASE-XLA-07828] c 08 N71-27057  
Variable digital processor including a register for shifting and rotating bits in either direction Patent  
[NASA-CASE-GSC-10186] c 08 N71-33110  
Flexible computer accessed telemetry  
[NASA-CASE-NPO-11358] c 07 N72-25172  
Versatile arithmetic unit for high speed sequential decoder  
[NASA-CASE-NPO-11371] c 08 N73-12177  
Data processor with conditionally supplied clock signals  
[NASA-CASE-GSC-10975-1] c 08 N73-13187  
Automated attendance accounting system  
[NASA-CASE-NPO-11456] c 08 N73-26176  
Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c 32 N77-12240  
High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814  
Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MSC-20258-1] c 60 N84-28492  
Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1CU] c 60 N86-24224  
Convolver  
[NASA-CASE-NPO-16462-1CU] c 60 N86-24225

**DATA RECORDERS**

Data compressor Patent  
[NASA-CASE-XNP-04067] c 08 N71-22707  
Recorder using selective noise filter  
[NASA-CASE-ERC-10112] c 07 N72-21119  
Recorder/processor apparatus --- for optical data processing  
[NASA-CASE-GSC-11553-1] c 35 N74-15831

**DATA RECORDING**

System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c 08 N71-21042  
Data compressor Patent  
[NASA-CASE-XNP-04067] c 08 N71-22707  
Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778] c 08 N71-22710  
Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866  
On-film optical recording of camera lens settings  
[NASA-CASE-MSC-12363-1] c 14 N73-26431  
Image data rate converter having a drum with a fixed head and a rotatable head  
[NASA-CASE-NPO-11659-1] c 35 N74-11283  
Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c 35 N74-26946

**DATA REDUCTION**

Data compression system  
[NASA-CASE-XNP-09785] c 08 N69-21928  
Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c 05 N71-11202  
Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506  
Data compression processor Patent  
[NASA-CASE-NPO-10068] c 08 N71-19288  
Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c 08 N71-19435  
Data compressor Patent  
[NASA-CASE-XNP-04067] c 08 N71-22707  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171  
Data compression system  
[NASA-CASE-NPO-11243] c 07 N72-20154  
Digital slope threshold data compressor  
[NASA-CASE-NPO-11630] c 08 N72-33172

**DATA RETRIEVAL**

Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c 08 N71-12504  
Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NPO-13321-1] c 32 N75-26195

**DATA SAMPLING**

Reduced bandwidth video communication system utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c 07 N71-23026  
Signal processing apparatus for multiplex transmission Patent  
[NASA-CASE-NPO-10388] c 07 N71-24622  
Television signal processing system Patent  
[NASA-CASE-NPO-10140] c 07 N71-24742  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171

Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328  
CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N81-27396

**DATA SMOOTHING**  
Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964  
Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c 33 N82-24417

**DATA STORAGE**  
Data handling system based on source significance, storage availability and data received from the source Patent Application  
[NASA-CASE-XNP-04162-1] c 08 N70-34675  
Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c 08 N71-12504  
Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420  
Event recorder Patent  
[NASA-CASE-XLA-01832] c 14 N71-21006  
System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c 08 N71-21042  
Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778] c 08 N71-22710  
Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131  
Dual purpose momentum wheels for spacecraft with magnetic recording  
[NASA-CASE-NPO-11481] c 21 N73-13644  
Data storage, image tube type  
[NASA-CASE-MS-C-14053-1] c 60 N74-12888  
Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337

**DATA SYSTEMS**  
Data handling system based on source significance, storage availability and data received from the source Patent Application  
[NASA-CASE-XNP-04162-1] c 08 N70-34675  
Rate augmented digital to analog converter Patent  
[NASA-CASE-XLA-07828] c 08 N71-27057  
Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MS-C-14070-1] c 32 N74-32598

**DATA TRANSFER (COMPUTERS)**  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255

**DATA TRANSMISSION**  
Telemetry word forming unit  
[NASA-CASE-XNP-09225] c 09 N69-24333  
Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent  
[NASA-CASE-XNP-00911] c 08 N70-41961  
Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506  
Data compression processor Patent  
[NASA-CASE-NPO-10068] c 08 N71-19288  
Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c 08 N71-19435  
Phase quadrature-plural channel data transmission system Patent  
[NASA-CASE-XAC-06302] c 08 N71-19763  
Reduced bandwidth video communication system utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c 07 N71-23026  
Frequency shift keying apparatus Patent  
[NASA-CASE-XGS-01537] c 07 N71-23405  
Decoder system Patent  
[NASA-CASE-NPO-10118] c 07 N71-24741  
Data compression system  
[NASA-CASE-NPO-11243] c 07 N72-20154  
Multichannel telemetry system  
[NASA-CASE-NPO-11572] c 07 N73-16121  
Automated attendance accounting system  
[NASA-CASE-NPO-11456] c 08 N73-26176  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519  
Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328  
Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c 32 N77-30308  
Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c 74 N79-34011  
System for a displaying at a remote station data generated at a central station and for powering the remote station from the central station  
[NASA-CASE-GSC-12411-1] c 33 N81-14221  
A single frequency multitransmitter telemetry system  
[NASA-CASE-LAR-13006-1] c 17 N83-20995

Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MS-C-20258-1] c 60 N84-28492

**DAWSONITE**  
Synthesis of dawsonites --- for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977

**DEBRIS**  
Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090

**DECAY RATES**  
Solar sensor having coarse and fine sensing with matched preirradiated cells and method of selecting cells Patent  
[NASA-CASE-XLA-01584] c 14 N71-23269

**DECELERATION**  
Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410  
Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c 14 N70-41812  
Hot air balloon deceleration and recovery system Patent  
[NASA-CASE-XLA-06824-2] c 02 N71-11037  
Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c 14 N71-23227

**DECIMALS**  
High speed direct binary to binary coded decimal converter and scaler  
[NASA-CASE-KSC-10595] c 08 N73-12176

**DECISION MAKING**  
Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MS-C-14070-1] c 32 N74-32598

**DECODERS**  
Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650  
BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890  
Encoder/decoder system for a rapidly synchronizable binary code Patent  
[NASA-CASE-NPO-10342] c 10 N71-33407  
Compact-bi-phase pulse coded modulation decoder  
[NASA-CASE-XSC-10834-1] c 33 N76-14371  
Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MS-C-14557-1] c 32 N76-16249  
Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c 33 N77-26386  
Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359  
Reed-Solomon decoder --- applicable to Galileo Project requirements  
[NASA-CASE-NPO-15982-1] c 60 N85-20680

**DECODING**  
Decoder system Patent  
[NASA-CASE-NPO-10118] c 07 N71-24741  
Versatile arithmetic unit for high speed sequential decoder  
[NASA-CASE-NPO-11371] c 08 N73-12177  
Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MS-C-14070-1] c 32 N74-32598  
Differential pulse code modulation  
[NASA-CASE-MS-C-12506-1] c 32 N77-12239

**DECOMMUTATORS**  
Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359  
Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491

**DECONTAMINATION**  
Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499  
Helium refrigerator and method for decontaminating the refrigerator  
[NASA-CASE-NPO-10634] c 23 N72-25619  
Plasma cleaning device --- designed for high vacuum environments  
[NASA-CASE-MFS-22906-1] c 75 N78-27913

**DEEP SPACE NETWORK**  
Low phase noise digital frequency divider  
[NASA-CASE-NPO-11569] c 10 N73-26229

**DEFECTS**  
Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c 38 N78-32447

**DEFLECTION**  
Bipropellant injector  
[NASA-CASE-XNP-09461] c 28 N72-23809  
Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c 74 N80-21138

**DEFLECTORS**  
Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788  
Aircraft wheel spray drag alleviator Patent  
[NASA-CASE-XLA-01583] c 02 N70-36825

Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173  
Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c 34 N76-18364  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343

**DEFOCUSING**  
Retrodirectional modulator Patent  
[NASA-CASE-GSC-10062] c 14 N71-15605

**DEFORMATION**  
Arbitrarily shaped model survey system Patent  
[NASA-CASE-LAR-10098] c 32 N71-26681  
Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500

**DEGASSING**  
Degassifying and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MS-C-18936-1] c 35 N83-29652

**DEGREES OF FREEDOM**  
Training vehicle for controlling attitude Patent  
[NASA-CASE-XMS-02977] c 11 N71-10746  
Dynamic vibration absorber Patent  
[NASA-CASE-LAR-10083-1] c 15 N71-27006  
Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c 09 N75-15662

**DEHUMIDIFICATION**  
Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465

**DEHYDRATED FOOD**  
Modification of the physical properties of freeze-dried rice  
[NASA-CASE-MS-C-13540-1] c 05 N72-33096

**DEICERS**  
Electro-explosive separation system  
[NASA-CASE-ARC-11613-1] c 33 N85-29150  
Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671

**DELAY CIRCUITS**  
Pulsed differential comparator circuit Patent  
[NASA-CASE-XLE-03804] c 10 N71-19471  
Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418  
Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c 17 N76-22245  
Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c 33 N78-25319  
Pseudonoise code tracking loop  
[NASA-CASE-MS-C-18035-1] c 32 N81-15179

**DELAY LINES**  
A solid state acoustic variable time delay line Patent  
[NASA-CASE-ERC-10032] c 10 N71-25900

**DELTA MODULATION**  
Multifunction audio digitizer --- producing direct delta and pulse code modulation  
[NASA-CASE-MS-C-13855-1] c 35 N74-17885

**DELTA WINGS**  
Variable-geometry winged reentry vehicle Patent  
[NASA-CASE-XLA-00241] c 31 N70-37986

**DEMAGNETIZATION**  
Tumbler system to provide random motion  
[NASA-CASE-XGS-02437] c 15 N69-21472

**DEMODULATION**  
Phase quadrature-plural channel data transmission system Patent  
[NASA-CASE-XAC-06302] c 08 N71-19763  
Facsimile video remodulation network  
[NASA-CASE-GSC-10185-1] c 07 N72-12081  
Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c 33 N78-32338  
Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546

**DEMODULATORS**  
Telemetry word forming unit  
[NASA-CASE-XNP-09225] c 09 N69-24333  
Frequency shift keyed demodulator Patent  
[NASA-CASE-XGS-02889] c 07 N71-11282  
Bi-carrier demodulator with modulation Patent  
[NASA-CASE-XMF-01160] c 07 N71-11298  
Demodulation system Patent  
[NASA-CASE-XAC-04030] c 10 N71-19472  
Laser calibrator Patent  
[NASA-CASE-XLA-03410] c 16 N71-25914  
Frequency modulation demodulator threshold extension device Patent  
[NASA-CASE-MS-C-12165-1] c 07 N71-33696  
Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c 33 N74-14939  
Unbalanced quadrature demodulator  
[NASA-CASE-MS-C-14840-1] c 32 N77-24331  
Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267

Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c 35 N81-19427

Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570

**DENDRITIC CRYSTALS**  
Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888

**DENSIFICATION**  
Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c 24 N83-13171

**DENSITOMETERS**  
Apparatus having coaxial capacitor structure for measuring fluid density Patent  
[NASA-CASE-XLE-00143] c 14 N70-36618

Densitometer Patent  
[NASA-CASE-XLE-00688] c 14 N70-41330

Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c 35 N75-12271

**DENSITY (MASS/VOLUME)**  
Non-toxic invert analog glass compositions of high modulus  
[NASA-CASE-HQN-10328-2] c 27 N82-29454

Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968

**DENSITY DISTRIBUTION**  
Apparatus for increasing ion engine beam density Patent  
[NASA-CASE-XLE-00519] c 28 N70-41576

Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas  
[NASA-CASE-ARC-10631-1] c 74 N76-20958

**DENSITY MEASUREMENT**  
Apparatus having coaxial capacitor structure for measuring fluid density Patent  
[NASA-CASE-XLE-00143] c 14 N70-36618

Densitometer Patent  
[NASA-CASE-XLE-00688] c 14 N70-41330

Determining particle density using known material Hugoniot curves  
[NASA-CASE-LAR-11059-1] c 76 N75-12810

Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c 35 N78-15461

Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29661

Device for determining frost depth and density  
[NASA-CASE-NFS-25754-1] c 35 N84-28018

**DENTISTRY**  
Process for the preparation of brushite crystals  
[NASA-CASE-ERC-10338] c 04 N72-33072

Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c 52 N82-29862

**DEOXYGENATION**  
Electrocatalyst for oxygen reduction  
[NASA-CASE-HQN-10537-1] c 06 N72-10138

**DEPLOYMENT**  
Minimech self-deploying boom mechanism  
[NASA-CASE-GSC-10566-1] c 15 N72-18477

Deployable solar cell array  
[NASA-CASE-NPO-10883] c 31 N72-22874

Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c 18 N80-14183

High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272

Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479

Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605

Latching mechanism for deployable/re-stowable columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791

**DEPOSITION**  
Means and methods of depositing thin films on substrates Patent  
[NASA-CASE-XNP-00595] c 15 N70-34967

Monitoring deposition of films  
[NASA-CASE-MFS-20675] c 26 N73-26751

Production of pure metals  
[NASA-CASE-LEW-10906-1] c 25 N74-30502

Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N84-20670

Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695

Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153

Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826

Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550

**DEPOSITS**  
Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652

**DEPTH MEASUREMENT**  
Device for determining frost depth and density  
[NASA-CASE-NFS-25754-1] c 35 N84-28018

Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1CU] c 35 N86-32700

**DESCENT**  
Emergency descent device  
[NASA-CASE-MFS-23074-1] c 54 N77-21844

**DESIGN ANALYSIS**  
Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil  
[NASA-CASE-LAR-10585-1] c 02 N76-22154

Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14823-1] c 52 N77-28717

**DESTRUCTIVE TESTS**  
Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12458-1] c 44 N83-21503

**DESULFURIZING**  
Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527

Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154

Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246

Crude oil desulfurization  
[NASA-CASE-NPO-14542-1] c 25 N82-23282

Coal desulfurization by aqueous chlorination  
[NASA-CASE-NPO-14902-1] c 25 N82-29371

Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743

Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253

**DETECTION**  
Heated element fluid flow sensor Patent  
[NASA-CASE-MSC-12084-1] c 12 N71-17569

Leak detector Patent  
[NASA-CASE-LAR-10323-1] c 12 N71-17573

Metallic intrusion detector system  
[NASA-CASE-ARC-10265-1] c 10 N72-28240

Cosmic dust or other similar outer space particles impact location detector  
[NASA-CASE-GSC-11291-1] c 25 N72-33696

Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c 14 N73-13435

Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c 36 N74-15145

Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612

Photoelectric detection system --- manufacturing automation  
[NASA-CASE-MFS-23776-1] c 33 N82-28545

Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c 35 N82-28604

Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139

Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282

Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373

Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374

Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431

**DETECTORS**  
Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996

Detector panels-micrometeoroid impact Patent  
[NASA-CASE-XLA-05906] c 31 N71-16221

Pulse activated polarographic hydrogen detector Patent  
[NASA-CASE-XMF-06531] c 14 N71-17575

Light position locating system Patent  
[NASA-CASE-XNP-01059] c 23 N71-21821

Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910

Precipitation detector Patent  
[NASA-CASE-XLA-02619] c 10 N71-26334

Hydrogen fire blink detector  
[NASA-CASE-MFS-15063] c 14 N72-25412

Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484

Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741

Meteoroid detector  
[NASA-CASE-LAR-10483-1] c 14 N73-32327

Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c 35 N74-21062

Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c 35 N76-18403

Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706

Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767

**DETERGENTS**  
Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c 23 N75-14834

Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N86-20807

**DETONATION**  
Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425

**DETONATION WAVES**  
Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983

**DEUTERIUM**  
Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c 06 N72-25146

Deuterium pass through target --- neutron emitting target  
[NASA-CASE-LEW-11866-1] c 72 N76-15860

**DEW POINT**  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373

**DIAGNOSIS**  
Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751

Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783

**DIAGRAMS**  
Phototransistor  
[NASA-CASE-MFS-20407] c 09 N73-19235

**DIALYSIS**  
Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687

**DIAMETERS**  
Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-1] c 37 N85-29289

**DIAMINES**  
Elastomeric silazane polymers and process for preparing the same Patent  
[NASA-CASE-XMF-04133] c 06 N71-20717

Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740

Siloxane containing epoxide compounds  
[NASA-CASE-MFS-13994-2] c 06 N72-25148

Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980

Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c 27 N79-33316

Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c 27 N81-14078

The 1-(dialkoxyphosphonyl)methyl-2,4- and -2,6-dinitro- and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-1] c 23 N83-28076

Fire resistant polymers based on 1-((dialkoxyphosphonyl)methyl)-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11512-1] c 27 N84-20702

Process for preparing highly optically transparent-colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N85-21360

Fire resistant polymers based on 1-(diorgano oxyphosphonyl)methyl-2,4- and 2,6-diamino benzenes  
[NASA-CASE-ARC-11512-2] c 27 N85-21362

Polyenamines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N86-19462

Copolyimides with a combination of flexibilizing groups  
[NASA-CASE-LAR-13354-1] c 27 N86-20566

Amine terminated bisaspartamide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726

Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727



## DIAMONDS

- Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c 15 N72-20446
- Process for making diamonds  
[NASA-CASE-MFS-20698-2] c 15 N73-19457
- Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267
- DIAPHRAGMS (MECHANICS)**
- Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233
- Reinforcing means for diaphragms Patent  
[NASA-CASE-XNP-01962] c 32 N70-41370
- Self-sealing, unbonded, rocket motor nozzle closure  
Patent  
[NASA-CASE-XLA-02651] c 28 N70-41967
- Means for controlling rupture of shock tube diaphragms  
Patent  
[NASA-CASE-XAC-00731] c 11 N71-15960
- Fast opening diaphragm Patent  
[NASA-CASE-XLA-03660] c 15 N71-21060
- Inertia diaphragm pressure transducer Patent  
[NASA-CASE-XAC-02981] c 14 N71-21072
- Convoluting device for forming convolutions and the like  
Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811
- Differential pressure control  
[NASA-CASE-MFS-14216] c 14 N73-13418
- Flexible diaphragm: Extreme temperature usage  
[NASA-CASE-MSC-20797-1] c 37 N86-20806
- Fluid flow meter for measuring the rate of fluid flow in a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752
- DIATOMIC GASES**
- Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426
- DICHROISM**
- Dichroic plate --- as bandpass filters  
[NASA-CASE-NPO-13506-1] c 35 N76-15435
- Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c 33 N79-28416
- DICKE RADIOMETERS**
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c 35 N80-18359
- DIDYMIUM**
- Didymium hydrate additive to nickel hydroxide electrodes  
Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608
- DIELECTRIC PROPERTIES**
- Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c 14 N72-22442
- Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c 35 N79-17192
- DIELECTRICS**
- Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c 03 N69-24267
- Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c 14 N69-39937
- Space vehicle electrical system Patent  
[NASA-CASE-XMF-00517] c 03 N70-34157
- Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984
- Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808
- Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135
- Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065
- Method of manufacturing semiconductor devices using refractory dielectrics  
[NASA-CASE-XER-08476-1] c 26 N72-17820
- Screened circuit capacitors  
[NASA-CASE-LAR-10294-1] c 26 N72-28762
- Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c 32 N74-11000
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c 33 N75-18477
- Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994
- Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c 27 N79-14214
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372
- A method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N86-20128
- DIELS-ALDER REACTIONS**
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039

- Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N86-25477
- DIENES**
- Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N86-25477
- DIES**
- Convoluting device for forming convolutions and the like  
Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811
- Extrusion die for refractory metals Patent  
[NASA-CASE-XLE-06773] c 15 N71-23817
- Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491
- Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276
- DIESEL ENGINES**
- Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555
- Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808
- DIETS**
- Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c 52 N75-15270
- DIFFERENCES**
- Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117
- DIFFERENTIAL AMPLIFIERS**
- Temperature compensated solid state differential amplifier Patent  
[NASA-CASE-XAC-00435] c 09 N70-35440
- Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772
- Multi-channel temperature measurement amplification system --- solar heating systems  
[NASA-CASE-MFS-23775-1] c 44 N82-16474
- Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670
- DIFFERENTIAL INTERFEROMETRY**
- Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587
- DIFFERENTIAL PRESSURE**
- Relief valve  
[NASA-CASE-XMS-05894-1] c 15 N69-21924
- Apparatus for ejection of an instrument cover  
[NASA-CASE-XMF-04132] c 15 N86-27502
- Differential sound level meter  
[NASA-CASE-LAR-12106-1] c 71 N78-14867
- Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c 74 N78-17867
- System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300
- DIFFERENTIATORS**
- Window comparator  
[NASA-CASE-FRC-10090-1] c 33 N78-18308
- DIFFRACTION**
- Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868
- DIFFRACTION PATTERNS**
- Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215
- DIFFRACTOMETERS**
- Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c 14 N73-28491
- DIFFUSE RADIATION**
- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879
- DIFFUSERS**
- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c 44 N79-11468
- Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MRS-25791-1] c 09 N84-27749
- DIFFUSION**
- A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148
- Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c 15 N71-24046
- Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c 70 N74-13436

## DIFFUSION PUMPS

- Trap for preventing diffusion pump backstreaming  
[NASA-CASE-GSC-10518-1] c 15 N72-22489
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-22771
- DIFFUSION WELDING**
- Thermal compression bonding of interconnectors  
[NASA-CASE-GSC-10303] c 15 N72-22487
- Bonding of reinforced Teflon to metals  
[NASA-CASE-MFS-20482] c 15 N72-22492
- Enhanced diffusion welding  
[NASA-CASE-LEW-11388-1] c 15 N73-32358
- Method of fluxless brazing and diffusion bonding of aluminum containing components  
[NASA-CASE-MSC-14435-1] c 37 N76-18455
- Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296
- DIFFUSIVITY**
- Diffusely reflecting paints including polytetrafluoroethylene and method of manufacture  
[NASA-CASE-GSC-12883-1] c 27 N85-29044
- DIGITAL COMMAND SYSTEMS**
- Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525
- System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent  
[NASA-CASE-XMF-06892] c 09 N71-24805
- Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c 08 N71-29034
- DIGITAL COMPUTERS**
- Disk pack cleaning table Patent Application  
[NASA-CASE-LAR-10590-1] c 15 N70-26819
- Binary number sorter Patent  
[NASA-CASE-NPO-10112] c 08 N71-12502
- Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505
- Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566
- Error correcting method and apparatus Patent  
[NASA-CASE-XNP-02748] c 08 N71-22749
- Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650
- Digital memory sense amplifying means Patent  
[NASA-CASE-XNP-01012] c 08 N71-28925
- Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135
- High speed direct binary to binary coded decimal converter and scaler  
[NASA-CASE-KSC-10595] c 08 N73-12176
- Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MSC-12531-1] c 35 N75-30504
- Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751
- Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c 60 N78-10709
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212
- Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- DIGITAL DATA**
- Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent  
[NASA-CASE-XNP-00911] c 08 N70-41961
- Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420
- Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001
- Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739
- Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c 07 N72-20140
- Digital control and information system  
[NASA-CASE-NPO-11016] c 08 N72-31226
- Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c 62 N76-31946
- Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c 60 N79-20751
- Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733
- Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491
- DIGITAL FILTERS**
- Signal detection and tracking apparatus Patent  
[NASA-CASE-XGS-03502] c 10 N71-20852

- Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c 08 N71-29034
- Counting digital filters  
[NASA-CASE-NPO-11821-1] c 08 N73-26175
- Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c 32 N78-21368
- DIGITAL INTEGRATORS**  
Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c 33 N79-22373
- DIGITAL RADAR SYSTEMS**  
Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297
- DIGITAL SPACECRAFT TELEVISION**  
Digital television camera control system Patent  
[NASA-CASE-XNP-01472] c 14 N70-41807
- DIGITAL SYSTEMS**  
Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c 14 N70-34158
- Full binary adder Patent  
[NASA-CASE-XGS-00689] c 08 N70-34787
- Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001
- Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033
- Noninterruptible digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891
- Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-XNP-01466] c 10 N71-26434
- Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c 08 N72-20176
- Digital function generator  
[NASA-CASE-NPO-11104] c 08 N72-22165
- Digital video display system using cathode ray tube  
[NASA-CASE-NPO-11342] c 09 N72-25248
- Digital slope threshold data compressor  
[NASA-CASE-NPO-11630] c 08 N72-33172
- Data processor with conditionally supplied clock signals  
[NASA-CASE-GSC-10975-1] c 08 N73-13187
- Low phase noise digital frequency divider  
[NASA-CASE-NPO-11569] c 10 N73-26229
- Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
[NASA-CASE-XNP-03623] c 09 N73-28084
- Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c 33 N74-12887
- Digital controller for a Baum folding machine --- providing automatic counting and machine shutoff  
[NASA-CASE-LAR-10688-1] c 37 N74-21056
- Digital transmitter for data bus communication system  
[NASA-CASE-MSC-14558-1] c 32 N75-21486
- Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c 33 N76-18353
- Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c 32 N77-10392
- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289
- Open loop digital frequency multiplier  
[NASA-CASE-MSC-12709-1] c 33 N77-24375
- Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MSC-12743-1] c 32 N79-10263
- Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313
- Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267
- Memory-based frame synchronizer --- for digital communication systems  
[NASA-CASE-GSC-12430-1] c 60 N82-16747
- Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570
- Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583
- Error correction method and apparatus for electronic timepieces  
[NASA-CASE-LAR-12654-1] c 33 N83-36357
- Tone calibrated digital radio communication system  
[NASA-CASE-NPO-16414-1-CU] c 32 N85-29121
- Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264
- DIGITAL TECHNIQUES**  
Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692
- Exclusive-Or digital logic module Patent  
[NASA-CASE-XLA-07732] c 08 N71-18751
- Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent  
[NASA-CASE-XNP-06957] c 14 N71-21088
- Digital cardiometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896
- Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613
- Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215
- Rate data encoder  
[NASA-CASE-LAR-10128-1] c 08 N73-20217
- Digital communication system  
[NASA-CASE-MSC-13912-1] c 32 N74-30524
- Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c 33 N75-25040
- Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349
- Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583
- Nanosequencer digital logic controller  
[NASA-CASE-NPO-16116-1] c 60 N84-25306
- Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- DIGITAL TO ANALOG CONVERTERS**  
Rate augmented digital to analog converter Patent  
[NASA-CASE-XLA-07828] c 08 N71-27057
- Buffered analog converter  
[NASA-CASE-KSC-10397] c 08 N72-25206
- Digital to analog conversion apparatus  
[NASA-CASE-MSC-12458-1] c 08 N73-32081
- Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c 33 N82-24417
- Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491
- Method and apparatus for operating on companded PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513
- DIGITAL TRANSDUCERS**  
Digital to analog conversion apparatus  
[NASA-CASE-MSC-12458-1] c 08 N73-32081
- Angle detector  
[NASA-CASE-ARC-11036-1] c 35 N78-32395
- DIISOCYANATES**  
Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099
- Polyurethanes from fluoroalkyl propyleneglycol polyethers  
[NASA-CASE-MFS-10506] c 06 N73-30100
- Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c 06 N73-30103
- DIMENSIONAL MEASUREMENT**  
Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875
- DIMENSIONS**  
Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c 35 N78-17357
- DIODES**  
Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796
- Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c 03 N71-23354
- Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701
- Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c 10 N72-22236
- Method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c 15 N72-25457
- Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214
- Wide temperature range electronic device with lead attachment  
[NASA-CASE-ERC-10224-2] c 09 N73-27150
- High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c 33 N74-22814
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339
- Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c 33 N78-32341
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029
- Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264
- Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305
- DIPHENYL COMPOUNDS**  
Amine terminated bisaspartimides, process for preparation thereof, and polymers thereof  
[NASA-CASE-ARC-11421-1] c 27 N84-16340
- Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841
- Amine terminated bisaspartimide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726
- DIPOLE ANTENNAS**  
Circularly polarized antenna  
[NASA-CASE-ERC-10214] c 09 N72-31235
- Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c 32 N82-11336
- DIRECT CURRENT**  
Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c 03 N69-21330
- Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987
- Thermionic diode switch Patent  
[NASA-CASE-NPO-10404] c 03 N71-12255
- A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c 10 N71-18723
- Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772
- Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c 10 N71-19418
- Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c 25 N71-21693
- Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c 09 N71-23188
- Positive dc to negative dc converter Patent  
[NASA-CASE-XMF-08217] c 03 N71-23239
- Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317
- Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c 09 N71-23573
- Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904
- Inverter with means for base current shaping for sweeping charge carriers from base region Patent  
[NASA-CASE-XGS-06226] c 10 N71-25950
- Dual polarity full wave dc motor drive Patent  
[NASA-CASE-XNP-07477] c 09 N71-26092
- A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886
- Cyclic switch Patent  
[NASA-CASE-LEW-10155-1] c 09 N71-29035
- Load-insensitive electrical device  
[NASA-CASE-XER-11048] c 09 N72-22203
- A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253
- Electric motive machine including magnetic bearing  
[NASA-CASE-XGS-07805] c 15 N72-33476
- Powerplexer  
[NASA-CASE-MSC-12396-1] c 03 N73-31988
- Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c 33 N74-21851
- Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
[NASA-CASE-XER-11046-2] c 33 N74-22864
- Differential pulse code modulation  
[NASA-CASE-GSC-12506-1] c 32 N77-12239
- Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c 33 N77-26386
- Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338
- Direct current transformer  
[NASA-CASE-MFS-23659-1] c 33 N79-17133
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393
- Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352
- Direct current ballast circuit for metal halide lamp  
[NASA-CASE-MSC-18407-1] c 33 N82-24427
- Ferroresonant regulated power supply  
[NASA-CASE-NPO-15977-1-CU] c 33 N86-20673
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- Four quadrant control circuit for a brushless three phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N86-20682



## DIRECT LIFT CONTROLS

- Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106
- DIRECT POWER GENERATORS**  
Energy conversion apparatus Patent  
[NASA-CASE-XLE-00212] c 03 N70-34134  
Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c 33 N71-17610  
Positive dc to negative dc converter Patent  
[NASA-CASE-XMF-08217] c 03 N71-23239  
Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893  
Load insensitive electrical device --- power converters for supplying direct current at one voltage from a source at another voltage  
[NASA-CASE-XER-11046-2] c 33 N74-22864  
Bi-directional control system for energy flow in a solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N84-32913
- DIRECTION FINDING**  
Improved flux-gate magnetometer  
[NASA-CASE-LAR-13560-1] c 35 N86-32701
- DIRECTIONAL ANTENNAS**  
Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907  
Weatherproof helix antenna Patent  
[NASA-CASE-XKS-08485] c 07 N71-19493  
Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854  
Reversible motion drive system Patent  
[NASA-CASE-NPO-10173] c 15 N71-24696  
Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c 32 N76-18295  
Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587
- DIRECTIONAL CONTROL**  
Gimballed, partially submerged rocket nozzle Patent  
[NASA-CASE-XMF-01544] c 28 N70-34162  
Omnidirectional wheel  
[NASA-CASE-MFS-21309-1] c 37 N74-18125  
Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106  
Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132
- DIRECTIONAL SOLIDIFICATION (CRYSTALS)**  
Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419  
High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750
- DIRECTIONAL STABILITY**  
Nose gear steering system for vehicle with main skids Patent  
[NASA-CASE-XLA-01804] c 02 N70-34160  
System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c 20 N76-21275
- DIRECTIVITY**  
Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900
- DISCONNECT DEVICES**  
Gas actuated bolt disconnect Patent  
[NASA-CASE-XLA-00326] c 03 N70-34667  
Umbilical disconnect Patent  
[NASA-CASE-XLA-00711] c 03 N71-12258  
Remote controlled tubular disconnect Patent  
[NASA-CASE-XLA-01396] c 03 N71-12259  
Quick release connector Patent  
[NASA-CASE-XLA-01141] c 15 N71-13789  
Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489  
Separation simulator Patent  
[NASA-CASE-XKS-04631] c 10 N71-23663  
Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903  
Breakaway connector  
[NASA-CASE-NPO-11140] c 15 N72-17455  
Torsional disconnect unit  
[NASA-CASE-NPO-10704] c 15 N72-20445  
Frangible link  
[NASA-CASE-MSC-11849-1] c 15 N72-22488  
Quick disconnect coupling  
[NASA-CASE-NPO-11202] c 15 N72-25450  
Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c 37 N76-14463  
Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c 37 N79-11402  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609

- Slide release mechanism --- for space shuttle orbiter/external tank connection device  
[NASA-CASE-MSC-20080-1] c 37 N85-30334
- Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N86-19613
- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801
- DISCONTINUITY**  
Strain coupled servo control system Patent  
[NASA-CASE-XLA-08530] c 32 N71-25360
- DISCRIMINATORS**  
Phase detector assembly Patent  
[NASA-CASE-XMF-00701] c 09 N70-40272  
Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537  
Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692  
Comparator for the comparison of two binary numbers Patent  
[NASA-CASE-XNP-04819] c 08 N71-23295  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c 33 N75-25041  
Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539
- DISPENSERS**  
Liquid aerosol dispenser  
[NASA-CASE-MFS-20829] c 12 N72-21310  
Potable water dispenser  
[NASA-CASE-MFS-21115-1] c 54 N74-12779  
Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c 37 N74-13178  
Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c 54 N74-17853  
Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c 35 N78-19466
- DISPERSING**  
Shock tube powder dispersing apparatus Patent  
[NASA-CASE-XLE-04946] c 17 N71-24911  
Powder fed sheared dispersal particle generator  
[NASA-CASE-LAR-12785-1] c 37 N84-16561
- DISPERSIONS**  
Preparation of alkali metal dispersions  
[NASA-CASE-XNP-08876] c 17 N73-28573
- DISPLACEMENT**  
Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c 35 N74-15126
- DISPLACEMENT MEASUREMENT**  
Null-type vacuum microbalance Patent  
[NASA-CASE-XAC-00472] c 15 N70-40180  
Self-calibrating displacement transducer Patent  
[NASA-CASE-XLA-00781] c 09 N71-22999  
Angular displacement indicating gas bearing support system Patent  
[NASA-CASE-XLA-09346] c 15 N71-28740  
Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test  
[NASA-CASE-NPO-10778] c 14 N72-11364  
Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338  
Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072
- DISPLAY DEVICES**  
Integrated time shared instrumentation display Patent  
[NASA-CASE-XLA-01952] c 08 N71-12507  
Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421  
Fluidic-thermochromic display device Patent  
[NASA-CASE-ERC-10031] c 12 N71-18603  
Display for binary characters Patent  
[NASA-CASE-XGS-04987] c 08 N71-20571  
Optical projector system Patent  
[NASA-CASE-XNP-03853] c 23 N71-21882  
Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175  
BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890  
Noninterruptable digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891  
Analog signal integration and reconstruction system Patent  
[NASA-CASE-NPO-10344] c 10 N71-26544  
Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c 09 N71-33519  
System for quantizing graphic displays  
[NASA-CASE-NPO-10745] c 08 N72-22164

- Digital video display system using cathode ray tube  
[NASA-CASE-NPO-11342] c 09 N72-25248
- Scientific experiment flexible mount  
[NASA-CASE-MSC-12372-1] c 31 N72-25842
- Display system  
[NASA-CASE-ERC-10350] c 14 N73-20474
- Transparent switchboard  
[NASA-CASE-MSC-13746-1] c 10 N73-32143
- Recorder/processor apparatus --- for optical data processing  
[NASA-CASE-GSC-11553-1] c 35 N74-15831
- Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813
- G-load measuring and indicator apparatus --- for aircraft  
[NASA-CASE-ARC-10806] c 06 N74-27872
- X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c 33 N75-19517
- Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c 74 N77-20882
- Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLE-06094] c 33 N78-17293
- Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c 35 N78-17357
- Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083
- Chromatically corrected virtual image display --- lens design for flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N79-14892
- Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580
- System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c 74 N79-20856
- Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185
- System for displaying at a remote station data generated at a central station and for powering the remote station from the central station  
[NASA-CASE-GSC-12411-1] c 33 N81-14221
- System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212
- Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996
- Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920
- Simulator scene display evaluation  
[NASA-CASE-ARC-11504-1] c 09 N84-16221
- Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N84-20522
- Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71-NPO-15494-2] c 35 N85-34373
- Flat-panel, full-color electroluminescent display  
[NASA-CASE-LAR-13407-1] c 33 N86-24909
- Laser ranging and video display system  
[NASA-CASE-MSC-20870-1] c 36 N86-24977
- Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N86-25292
- Aircraft liftmeter  
[NASA-CASE-LAR-12518-1] c 06 N86-27280
- Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447
- DISSIPATION**  
Voltage regulator with plural parallel power source sections Patent  
[NASA-CASE-GSC-10891-1] c 10 N71-26626
- Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N84-32398
- DISSOCIATION**  
Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c 44 N77-22607
- DISSOLVING**  
Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c 15 N73-19458
- DISTANCE**  
Optical distance measuring instrument  
[US-PATENT-APPL-SN-406820] c 74 N83-13982
- DISTANCE MEASURING EQUIPMENT**  
Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209

Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175

Terminal guidance sensor system — space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519

Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681

Rotary target V-block  
[NASA-CASE-LAR-12007-3] c 35 N84-16523

**DISTILLATION EQUIPMENT**

Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086

Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184

Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129

**DISTRIBUTED AMPLIFIERS**

Cascaded complementary pair broadband transistor amplifiers Patent  
[NASA-CASE-NPO-10003] c 10 N71-26415

**DISTRIBUTED PROCESSING**

Distributed multiport memory architecture  
[NASA-CASE-NPO-15342-1] c 60 N83-32342

**DISTRIBUTION (PROPERTY)**

Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175

**DISTRIBUTORS**

High voltage distributor  
[NASA-CASE-GSC-11849-1] c 33 N76-16332

**DIVERGENT NOZZLES**

Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c 07 N74-27490

**DIVERTERS**

Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468

**DIVIDERS**

A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c 60 N74-20836

**DOCUMENT STORAGE**

File card marker Patent  
[NASA-CASE-XLA-02705] c 08 N71-15908

**DOMES (STRUCTURAL FORMS)**

Airborne tracking Sun photometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N86-21982

**DOORS**

Emergency escape system Patent  
[NASA-CASE-MSC-12086-1] c 05 N71-12345

CAM controlled retractable door latch  
[NASA-CASE-MSC-20304-1] c 37 N82-31690

**DOPED CRYSTALS**

FET charge sensor and voltage probe  
[NASA-CASE-NPO-16045-1] c 76 N84-33211

**DOPES**

Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N85-20535

Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875

**DOPPLER EFFECT**

Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978

Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-18212

Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174

Doppler shift system — system for measuring velocities of radiating particles  
[NASA-CASE-HQN-10740-1] c 72 N74-19310

Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510

An electro-optical Doppler tracker means and method for optical correlation of synthetic aperture radar data  
[NASA-CASE-NPO-14998-1] c 33 N81-15194

Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N83-18975

Vibration-free Raman Doppler velocimeter  
[NASA-CASE-LAR-13268-1] c 35 N85-29216

**DOPPLER RADAR**

Cooperative Doppler radar system Patent  
[NASA-CASE-LAR-10403] c 21 N71-11766

Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c 32 N84-22820

**DOSIMETERS**

Dosimeter for high levels of absorbed radiation Patent  
[NASA-CASE-XLA-03645] c 14 N71-20430

Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311

**DRAG CHUTES**

Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c 02 N70-41863

Lightweight, variable solidity knitted parachute fabric — for aerodynamic decelerators  
[NASA-CASE-LAR-10776-1] c 02 N74-10034

Extended moment arm anti-spin device  
[NASA-CASE-LAR-12979-1] c 05 N85-21147

**DRAG MEASUREMENT**

Air frame drag balance Patent  
[NASA-CASE-XLA-00113] c 14 N70-33386

Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-00755] c 01 N71-13410

Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-05828] c 01 N71-13411

Impact energy absorber Patent  
[NASA-CASE-XLA-01530] c 14 N71-23092

System for use in conducting wake investigation for a wing in flight — differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-26300

Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c 06 N81-17057

**DRAG REDUCTION**

Propeller blade loading control Patent  
[NASA-CASE-XAC-00139] c 02 N70-34856

Aircraft wheel spray drag alleviator Patent  
[NASA-CASE-XLA-01583] c 02 N70-36825

Leading edge vortex flaps for drag reduction — during subsonic flight  
[NASA-CASE-LAR-12750-1] c 02 N81-19016

Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288

Combined riblet and LEBU drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N85-28922

Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194

Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N86-26575

**DRIFT (INSTRUMENTATION)**

Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986

Radiation direction detector including means for compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c 14 N70-40239

Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175

**DRILL BITS**

Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c 15 N70-42034

Hole cutter — drill bits and rotating shaft  
[NASA-CASE-MFS-22649-1] c 37 N75-25186

**DRILLING**

Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c 31 N83-27058

Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N86-23750

**DRILLS**

Rock drill for recovering samples  
[NASA-CASE-XNP-07478] c 14 N69-21923

Soil penetrometer  
[NASA-CASE-NPO-05530] c 14 N73-32321

**DRIVES**

Transistor drive regulator Patent  
[NASA-CASE-LEW-10233] c 10 N71-27126

**DROP TOWERS**

Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442

Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176

**DROPS (LIQUIDS)**

Droplet monitoring probe  
[NASA-CASE-NPO-10985] c 14 N73-20478

**DRUGS**

Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c 25 N75-12086

**DRYING**

Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c 14 N73-28489

Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484

**DRYING APPARATUS**

Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080

**DUCTED FANS**

Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c 07 N79-14095

**DUCTILITY**

Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540

**DUCTS**

Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903

Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c 37 N78-14480

Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c 31 N80-32583

**DURABILITY**

Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c 37 N80-32717

**DUST COLLECTORS**

Disk pack cleaning table Patent Application  
[NASA-CASE-LAR-10590-1] c 15 N70-26819

Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104

**DYE LASERS**

Infrared tunable laser  
[NASA-CASE-ARC-10463-1] c 09 N73-32111

Laser head for simultaneous optical pumping of several dye lasers — with single flash lamp  
[NASA-CASE-LAR-11341-1] c 36 N75-19655

**DYES**

Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170

Method for retarding dye fading during archival storage of developed color photographic film — inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432

**DYNAMIC CHARACTERISTICS**

Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681

Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397

Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082

Universal clamp  
[NASA-CASE-MSC-20549-1] c 37 N86-19612

**DYNAMIC CONTROL**

Motion restraining device  
[NASA-CASE-NPO-13619-1] c 37 N78-16369

System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516

**DYNAMIC LOADS**

Multilegged support system Patent  
[NASA-CASE-XLA-01326] c 11 N71-21481

Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878

Impact monitoring apparatus  
[NASA-CASE-MSC-15826-1] c 14 N72-25411

**DYNAMIC MODULUS OF ELASTICITY**

Apparatus for positioning and loading a test specimen Patent  
[NASA-CASE-XLE-01300] c 15 N70-41993

**DYNAMIC RESPONSE**

Impact simulator Patent  
[NASA-CASE-XLA-00493] c 11 N70-34786

Instrument for measuring the dynamic behavior of liquids Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387

Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c 14 N71-29134

Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c 07 N79-14095

**DYNAMIC STRUCTURAL ANALYSIS**

Method and apparatus for measuring the damping characteristics of a structure  
[NASA-CASE-ARC-10154-1] c 14 N72-22440

**DYNAMIC TESTS**

Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677

Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604

**DYNAMOMETERS**

Thrust dynamometer Patent  
[NASA-CASE-XLE-00702] c 14 N70-40203

Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c 14 N71-20429

**E****EAR**

Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185

**EARTH ATMOSPHERE**

Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991

## EARTH CRUST

- Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679
- EARTH ORBITS**  
High temperature furnace for melting materials in space  
[NASA-CASE-MFS-20710] c 11 N72-23215  
A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth  
[NASA-CASE-MSC-12391] c 30 N73-12884
- EARTHQUAKES**  
Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N84-20808
- ECCENTRICS**  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370
- ECHELETTE GRATINGS**  
Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-14372-1] c 35 N80-26635
- ECHO SOUNDING**  
Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1CU] c 35 N86-32700
- ECHOES**  
Miniature implantable ultrasonic echosonometer  
[NASA-CASE-ARC-11035-1] c 52 N79-18580  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376
- EDDY CURRENTS**  
Apparatus and method for inspecting a bearing ball --- eddy current inspection technique  
[NASA-CASE-MFS-25833-1] c 35 N83-21316  
Apparatus and method for inspecting a bearing ball  
[NASA-CASE-MFS-25833-1] c 35 N86-32698
- EDGES**  
Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149
- EFFICIENCY**  
Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c 32 N74-20863  
Improved heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N84-32425
- EFFLUENTS**  
Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c 34 N77-24423  
Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c 34 N79-24285
- EGRESS**  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992
- EJECTION**  
Apparatus for ejection of an instrument cover  
[NASA-CASE-XMF-04132] c 15 N69-27502
- EJECTION SEATS**  
Device for separating occupant from an ejection seat  
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[NASA-CASE-XMS-04625] c 05 N71-20718
- EJECTORS**  
Ejection unit Patent  
[NASA-CASE-XNP-00676] c 15 N70-38996  
Device for separating occupant from an ejection seat  
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[NASA-CASE-XMS-04625] c 05 N71-20718  
Latch/ejector unit Patent  
[NASA-CASE-XLA-03538] c 15 N71-24897  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609  
Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MRS-25791-1] c 09 N84-27749  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- ELASTIC BODIES**  
Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N69-27504  
Means for suppressing or attenuating bending motion of elastic bodies Patent  
[NASA-CASE-XAC-05632] c 32 N71-23971  
Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c 35 N74-27865
- ELASTIC DEFORMATION**  
Instrument for measuring torsional creep and recovery Patent  
[NASA-CASE-XLE-01481] c 14 N71-10781  
Means for suppressing or attenuating bending motion of elastic bodies Patent  
[NASA-CASE-XAC-05632] c 32 N71-23971

## ELASTIC MEDIA

- Miniature vibration isolator Patent  
[NASA-CASE-XLA-01019] c 15 N70-40156
- ELASTIC PROPERTIES**  
Elastic universal joint Patent  
[NASA-CASE-XNP-00416] c 15 N70-36947  
Deformable vehicle wheel Patent  
[NASA-CASE-MFS-20400] c 31 N71-18611  
Threadless fastener apparatus Patent  
[NASA-CASE-XFR-05302] c 15 N71-23254  
Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c 06 N73-33076  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615
- ELASTIC SHEETS**  
Method for forming plastic materials Patent  
[NASA-CASE-XMS-05516] c 15 N71-17803
- ELASTOMERS**  
Metal valve pintle with encapsulated elastomeric body Patent  
[NASA-CASE-MSC-12116-1] c 15 N71-17648  
Extensometer Patent  
[NASA-CASE-XMF-04680] c 15 N71-19489  
Elastomeric silazane polymers and process for preparing the same Patent  
[NASA-CASE-XMF-04133] c 06 N71-20717  
Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c 03 N71-23006  
Conductive elastomeric extensometer  
[NASA-CASE-MFS-21049-1] c 52 N74-27864  
Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575  
Method of making hollow elastomeric bodies  
[NASA-CASE-NPO-13535-1] c 37 N76-31524  
Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c 27 N78-32262  
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514  
Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515  
Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104  
Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259  
The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262  
Bifunctional monomers having terminal oxime and cyano or amide groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256  
Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c 37 N81-26447  
Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MSC-18382-1] c 27 N82-16238  
Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338  
Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340  
Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240  
Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322  
Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744  
Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349  
Electro-explosive separation system  
[NASA-CASE-ARC-11613-1] c 33 N85-29150  
Cathode for primary battery  
[NASA-CASE-NPO-16397-1-CU] c 33 N86-19517  
Polyimides containing ATBN elastomers and the process for preparing same  
[NASA-CASE-LAR-13178-1] c 27 N86-20565  
Perfluoro (Imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582
- ELBOW (ANATOMY)**  
Elbow and knee joint for hard space suits and the like  
[NASA-CASE-ARC-11610-1] c 54 N85-20666  
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[NASA-CASE-ARC-11610-1] c 54 N86-28619

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- Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c 33 N70-34540  
Electric arc welding Patent  
[NASA-CASE-XMF-00392] c 15 N70-34814  
Electric arc driven wind tunnel Patent  
[NASA-CASE-XMF-00411] c 11 N70-36913  
Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628  
Electric arc apparatus Patent  
[NASA-CASE-ARC-01677] c 09 N71-20816  
Arc electrode of graphite with ball tip Patent  
[NASA-CASE-XLE-04788] c 09 N71-22987  
High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c 33 N74-12913  
Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318  
Welding torch arc light reflector  
[NASA-CASE-MFS-29134-1] c 74 N86-20130
- ELECTRIC AUTOMOBILES**  
Additive for zinc electrodes --- electric automobiles  
[NASA-CASE-LEW-13286-1] c 33 N84-14422
- ELECTRIC BATTERIES**  
Spacecraft battery seals  
[NASA-CASE-XGS-03864] c 15 N69-24320  
Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051  
Method and apparatus for battery charge control Patent  
[NASA-CASE-XGS-05432] c 03 N71-19438  
Coulometer and third electrode battery charging circuit Patent  
[NASA-CASE-GSC-10487-1] c 03 N71-24719  
Heat activated cell Patent  
[NASA-CASE-LEW-11359] c 03 N71-28579  
Synchronous orbit battery cyclers  
[NASA-CASE-GSC-11211-1] c 03 N72-25020  
Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c 44 N74-19693  
Battery testing device --- for testing cells of multiple-cell battery  
[NASA-CASE-MFS-20761-1] c 44 N74-27519  
Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c 44 N76-14601  
Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c 44 N76-18643  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664  
Voltage regulator for battery power source --- using a bipolar transistor  
[NASA-CASE-FRC-10116-1] c 33 N79-23345  
In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c 27 N81-24257  
State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596
- ELECTRIC BRIDGES**  
Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200  
Infinite range electronics gain control circuit  
[NASA-CASE-GSC-10786-1] c 10 N72-28241  
Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c 33 N75-25041  
Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c 33 N78-13320  
Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494
- ELECTRIC CELLS**  
Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539  
Heat activated cell with alkali anode and alkali salt electrolyte Patent  
[NASA-CASE-LEW-11358] c 03 N71-26084  
Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044
- ELECTRIC CHARGE**  
Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c 03 N71-20407  
Automatic battery charger Patent  
[NASA-CASE-XNP-04758] c 03 N71-24605
- ELECTRIC CHOPPERS**  
Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c 10 N72-20221  
Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c 33 N78-17295
- ELECTRIC COILS**  
Broadband choke for antenna structure  
[NASA-CASE-XMS-05303] c 07 N69-27462

- Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017
- Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c 35 N84-33769
- ELECTRIC CONDUCTORS**
- Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c 09 N69-21542
- Solar cell matrix Patent  
[NASA-CASE-NPO-10821] c 03 N71-19545
- Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610
- Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c 09 N71-24618
- Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c 15 N72-25447
- Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c 15 N73-27406
- Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c 44 N76-31666
- Velocity measurement system  
[NASA-CASE-MFS-23363-1] c 35 N78-32396
- Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c 33 N81-27397
- ELECTRIC CONNECTORS**
- Connector - Electrical  
[NASA-CASE-XLA-01288] c 09 N69-21470
- Test fixture for pellet-like electrical elements  
[NASA-CASE-XNP-06032] c 09 N69-21926
- Coupling device  
[NASA-CASE-XMS-07846-1] c 09 N69-21927
- Electrical feed-through connection for printed circuit boards and printed cable  
[NASA-CASE-XMF-01483] c 14 N69-27431
- Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c 09 N69-39734
- Electrical connector Patent Application  
[NASA-CASE-MFS-14741] c 09 N70-20737
- Electrical connector for flat cables Patent  
[NASA-CASE-XMF-00324] c 09 N70-34596
- Printed cable connector Patent  
[NASA-CASE-XMF-00369] c 09 N70-36494
- Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960
- Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986
- Coaxial cable connector Patent  
[NASA-CASE-XNP-04732] c 09 N71-20851
- Connector internal force gauge Patent  
[NASA-CASE-XNP-03918] c 14 N71-23087
- Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c 03 N71-23354
- Microelectronic module package Patent  
[NASA-CASE-XMS-02182] c 10 N71-28783
- Breakaway connector  
[NASA-CASE-NPO-11140] c 15 N72-17455
- Electrical connector  
[NASA-CASE-NPO-10694] c 09 N72-20200
- Radio frequency filter device  
[NASA-CASE-XLA-02609] c 09 N72-25256
- Use of unilluminated solar cells as shunt diodes for a solar array  
[NASA-CASE-GSC-10344-1] c 03 N72-27053
- Electrical connector  
[NASA-CASE-MFS-20757] c 09 N72-28225
- Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c 33 N74-26977
- Connector --- for connecting circuits on different layers of multilayer printed circuit boards  
[NASA-CASE-LAR-11709-1] c 37 N76-27567
- Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738
- Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c 52 N77-25772
- Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359
- Electrical self-aligning connector --- orbital servicer vehicles  
[NASA-CASE-MFS-25211-2] c 33 N84-14423
- ELECTRIC CONTACTS**
- Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500
- Deflective rod switch with elastic support and sealing means Patent  
[NASA-CASE-XNP-09808] c 09 N71-12518
- Method of making electrical contact on silicon solar cell and resultant product Patent  
[NASA-CASE-XLE-04787] c 03 N71-20492
- Continuous turning slip ring assembly Patent  
[NASA-CASE-XMF-01049] c 15 N71-23049
- Electrical connector  
[NASA-CASE-MFS-20757] c 09 N72-28225
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c 33 N75-18477
- Process for preparing liquid metal electrical contact device  
[NASA-CASE-LEW-11978-1] c 33 N77-26385
- Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422
- Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579
- Screen printed interdigitated back contact solar cell  
[NASA-CASE-LEW-13414-1] c 44 N85-20530
- ELECTRIC CONTROL**
- Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c 09 N71-23316
- Adjustable indicating device for load position  
[NASA-CASE-MFS-28008-1] c 35 N85-20300
- Four quadrant control circuit for a brushless three phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N86-20682
- ELECTRIC CURRENT**
- Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608
- Electrical load protection device Patent  
[NASA-CASE-MSC-12135-1] c 09 N71-12526
- Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent  
[NASA-CASE-XNP-00384] c 09 N71-13530
- Connector internal force gauge Patent  
[NASA-CASE-XNP-03918] c 14 N71-23087
- Pulse modulator providing fast rise and fall times Patent  
[NASA-CASE-XMS-04919] c 09 N71-23270
- Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271
- Protection of serially connected solar cells against open circuits by the use of shunting diode Patent  
[NASA-CASE-XLE-04535] c 03 N71-23354
- Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618
- Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154
- High voltage transistor amplifier with constant current load  
[NASA-CASE-NPO-11023] c 09 N72-17155
- Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199
- Saturation current protection apparatus for saturable core transformers  
[NASA-CASE-ERC-10075-2] c 09 N72-22196
- Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c 03 N72-23048
- Load current sensor for a series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c 09 N72-25249
- Method and apparatus for limiting field emission current  
[NASA-CASE-ERC-10015-2] c 10 N72-27246
- Deposition apparatus  
[NASA-CASE-LAR-10541-1] c 15 N72-32487
- Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c 33 N75-26246
- Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c 33 N78-10377
- Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c 33 N78-17296
- Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337
- Electroexplosive device  
[NASA-CASE-NPO-13858-1] c 28 N79-11231
- Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315
- Lightning current detector  
[NASA-CASE-KSC-11057-1] c 33 N79-14305
- Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c 44 N80-18551
- Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280
- Electro-expulsive separation system  
[NASA-CASE-ARC-11613-1] c 33 N85-29150
- Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212
- Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- ELECTRIC DISCHARGES**
- Electrical discharge apparatus for forming Patent  
[NASA-CASE-XMF-00375] c 15 N70-34249
- High voltage pulse generator Patent  
[NASA-CASE-MSC-12178-1] c 09 N71-13518
- Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same Patent  
[NASA-CASE-XNP-00745] c 10 N71-28960
- Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c 33 N74-20859
- Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c 33 N80-18286
- ELECTRIC ENERGY STORAGE**
- Apparatus for measuring current flow Patent  
[NASA-CASE-XGS-02439] c 14 N71-19431
- Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664
- Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c 44 N77-14581
- Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c 44 N77-22606
- Electrochemical cell for rebalancing REDOX flow system  
[NASA-CASE-LEW-13150-1] c 44 N79-26474
- Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521
- ELECTRIC EQUIPMENT**
- Ac power amplifier Patent Application  
[NASA-CASE-LAR-10218-1] c 09 N70-34559
- Generator for a space power system Patent  
[NASA-CASE-XLE-04250] c 09 N71-20446
- High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c 09 N71-20569
- Regulated power supply Patent  
[NASA-CASE-XMS-01891] c 09 N71-21449
- Method for improving the signal-to-noise ratio of the Wheatstone bridge type bolometer Patent  
[NASA-CASE-XLA-02810] c 14 N71-25901
- Buck boost voltage regulation circuit Patent  
[NASA-CASE-GSC-10735-1] c 10 N71-26085
- Electronically resettable fuse Patent  
[NASA-CASE-XGS-11177] c 09 N71-27001
- Voltage regulator Patent  
[NASA-CASE-ERC-10113] c 09 N71-27053
- Digital pulse width selection circuit Patent  
[NASA-CASE-XLA-07788] c 09 N71-29139
- Solar energy powered heliotrope  
[NASA-CASE-GSC-10945-1] c 21 N72-31637
- Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214
- Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c 15 N73-14469
- Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c 33 N74-17929
- Sprag solenoid brake --- development and operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c 37 N74-26976
- Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573
- Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c 77 N75-20140
- ELECTRIC EQUIPMENT TESTS**
- Test fixture for pellet-like electrical elements  
[NASA-CASE-XNP-06032] c 09 N69-21926
- Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c 09 N71-12519
- High power-high voltage waterload Patent  
[NASA-CASE-XNP-05381] c 09 N71-20842
- ELECTRIC FIELD STRENGTH**
- Apparatus for field strength measurement of a space vehicle Patent  
[NASA-CASE-XLE-00820] c 14 N71-18014
- Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c 09 N71-18086
- Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790
- Apparatus for determining the deflection of an electron beam impinging on a target Patent  
[NASA-CASE-XMF-06617] c 09 N71-24843
- ELECTRIC FIELDS**
- Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-00755] c 01 N71-13410
- Minimum induced drag airfoil body Patent  
[NASA-CASE-XLA-05828] c 01 N71-13411
- Instrument for measuring potentials on two dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421

Electron beam instrument for measuring electric fields Patent  
[NASA-CASE-XMF-10289] c 14 N71-23699

Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678

Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175

Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318

Electric field measuring and display system --- for cloud formations  
[NASA-CASE-KSC-10731-1] c 33 N74-27862

Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779

Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143

Method of measuring field funneling and range straggling in semiconductor charge-collecting junctions  
[NASA-CASE-NPO-16584-1-CU] c 76 N86-25269

**ELECTRIC FILTERS**

Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c 08 N71-18752

Remodulator filter Patent  
[NASA-CASE-NPO-10198] c 09 N71-24806

RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171

Multi-loop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
[NASA-CASE-ARC-10192] c 09 N72-21245

Radio frequency filter device  
[NASA-CASE-XLA-02609] c 09 N72-25256

Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171

**ELECTRIC FURNACES**

High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750

**ELECTRIC FUSES**

Electrical load protection device Patent  
[NASA-CASE-MSC-12135-1] c 09 N71-12526

Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796

Fused switch  
[NASA-CASE-XMS-01244-1] c 33 N79-33393

**ELECTRIC GENERATORS**

Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c 03 N69-21330

Generator for a space power system Patent  
[NASA-CASE-XLE-04250] c 09 N71-20446

Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent  
[NASA-CASE-XGS-03427] c 10 N71-23029

Continuous turning slip ring assembly Patent  
[NASA-CASE-XMF-01049] c 15 N71-23049

Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c 09 N71-23188

High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c 17 N71-23248

Variable width pulse integrator Patent  
[NASA-CASE-XLA-03356] c 10 N71-23315

Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114-2] c 09 N71-24807

RC rate generator for slow speed measurement Patent  
[NASA-CASE-XMF-02966] c 10 N71-24863

Pulse width inverter Patent  
[NASA-CASE-MFS-10068] c 10 N71-25139

Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c 10 N71-26414

Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366

Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114] c 33 N71-27862

Load-insensitive electrical device  
[NASA-CASE-XER-11046] c 09 N72-22203

Controllable load insensitive power converters  
[NASA-CASE-ERC-10268] c 09 N72-25252

A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253

Electromagnetic wave energy converter  
[NASA-CASE-GSC-11394-1] c 09 N73-32109

Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c 20 N75-24837

Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524

Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418

Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c 33 N77-26387

Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c 44 N80-21828

Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834

Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280

Linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft power supply  
[NASA-CASE-GSC-12518-1] c 33 N82-24421

Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319

Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424

Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769

Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N86-23744

**ELECTRIC IGNITION**

Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779

**ELECTRIC MOTOR VEHICLES**

Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N82-26776

**ELECTRIC MOTORS**

Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987

Electronic motor control system Patent  
[NASA-CASE-XMF-01129] c 09 N70-38712

Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451] c 09 N71-10677

Regenerative braking system Patent  
[NASA-CASE-XMF-01096] c 10 N71-16030

Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c 14 N71-17585

Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c 10 N71-18724

Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772

Detenting servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695

Transistor servo system including a unique differential amplifier circuit Patent  
[NASA-CASE-XMF-05195] c 10 N71-24861

Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895

Direct current motor with stationary armature and field Patent  
[NASA-CASE-XGS-05290] c 09 N71-25999

Dual polarity full wave dc motor drive Patent  
[NASA-CASE-XNP-07477] c 09 N71-26092

Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418

A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886

Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c 11 N72-20244

Electric motive machine including magnetic bearing  
[NASA-CASE-XGS-07805] c 15 N72-33476

Redundant speed control for brushless Hall effect motor  
[NASA-CASE-MFS-20207-1] c 09 N73-32107

Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c 33 N77-26386

Rotary electric device  
[NASA-CASE-GSC-12138-1] c 33 N79-20314

Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352

Linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft power supply  
[NASA-CASE-GSC-12518-1] c 33 N82-24421

Four quadrant control circuit for a brushless three phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N86-20682

**ELECTRIC NETWORKS**

Condition and condition duration indicator Patent  
[NASA-CASE-XMF-01097] c 10 N71-16058

Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent  
[NASA-CASE-XGS-03427] c 10 N71-23029

Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c 09 N71-23316

Broadband frequency discriminator Patent  
[NASA-CASE-NPO-10096] c 07 N71-24583

Test apparatus for locating shorts during assembly of electrical buses  
[NASA-CASE-ARC-11116-1] c 33 N82-24420

**ELECTRIC POTENTIAL**

Method and apparatus for battery charge control Patent  
[NASA-CASE-XGS-05432] c 03 N71-19438

Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c 09 N71-23188

Variable width pulse integrator Patent  
[NASA-CASE-XLA-03356] c 10 N71-23315

Voltage dropout sensor Patent  
[NASA-CASE-KSC-10020] c 10 N71-27338

Automated equipotential plotter  
[NASA-CASE-NPO-11134] c 09 N72-21246

Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200

Load-insensitive electrical device  
[NASA-CASE-XER-11046] c 09 N72-22203

Continuously variable voltage controlled phase shifter  
[NASA-CASE-NPO-11129] c 09 N72-33204

Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c 35 N78-10429

Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411

Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c 44 N80-18551

Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348

Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996

Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849

Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975

Simplified dc to dc converter  
[NASA-CASE-LEW-13495-1] c 33 N84-33663

Angular measurement system  
[NASA-CASE-MFS-25825-1] c 35 N85-20298

High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147

Magnetically switched power supply systems for lasers  
[NASA-CASE-NPO-16402-1] c 36 N85-29265

Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374

Angular measurement system  
[NASA-CASE-MFS-25825-1] c 31 N86-29055

**ELECTRIC POWER**

Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-XNP-02654] c 10 N70-42032

High power-high voltage waterload Patent  
[NASA-CASE-XNP-05381] c 09 N71-20842

Power factor control system for AC induction motors  
[NASA-CASE-MFS-23280-1] c 33 N78-10376

Shunt regulation electric power system  
[NASA-CASE-GSC-10135] c 33 N78-17296

Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280

**ELECTRIC POWER PLANTS**

Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c 44 N78-32542

Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018

**ELECTRIC POWER SUPPLIES**

Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154

Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c 03 N72-23048

Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c 10 N73-26228

Powerplexer  
[NASA-CASE-MSC-12396-1] c 03 N73-31988

Inherent redundancy electric heater  
[NASA-CASE-MFS-21462-1] c 33 N74-14935

Temperature compensated current source  
[NASA-CASE-MSC-11235] c 33 N78-17294

High voltage power supply  
[NASA-CASE-GSC-12818-1] c 33 N85-29147

Arc lamp power supply  
[NASA-CASE-LAR-13202-1] c 33 N86-32626

**ELECTRIC POWER TRANSMISSION**

Magnetic power switch Patent  
[NASA-CASE-NPO-10242] c 09 N71-24803

Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366

Powerplexer  
[NASA-CASE-MSC-12396-1] c 03 N73-31988

Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c 44 N74-19870

Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944

**ELECTRIC PROPULSION**  
Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c 11 N70-34844

**ELECTRIC PULSES**  
Pulse counting circuit which simultaneously indicates the occurrence of the nth pulse Patent  
[NASA-CASE-XMF-00906] c 09 N70-41655

Variable pulse width multiplier Patent  
[NASA-CASE-XLA-02850] c 09 N71-20447

Phonocardiograph transducer Patent  
[NASA-CASE-XMS-05365] c 14 N71-22993

Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent  
[NASA-CASE-XGS-03427] c 10 N71-23029

Variable width pulse integrator Patent  
[NASA-CASE-XLA-03356] c 10 N71-23315

Pulse rise time and amplitude detector Patent  
[NASA-CASE-XMF-08804] c 09 N71-24717

Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137

Precision rectifier with FET switching means Patent  
[NASA-CASE-ARC-10101-1] c 09 N71-33109

Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAR-11607-1] c 32 N77-14292

Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310

Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189

**ELECTRIC RELAYS**  
Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897

Time-division multiplexer Patent  
[NASA-CASE-XNP-00431] c 09 N70-38998

Out of tolerance warning alarm system for plurality of monitored circuits Patent  
[NASA-CASE-XMS-10984-1] c 10 N71-19417

Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773

Circuit breaker utilizing magnetic latching relays Patent  
[NASA-CASE-MSC-11277] c 09 N71-29008

Multi-cell battery protection system  
[NASA-CASE-LEW-12039-1] c 44 N78-14625

**ELECTRIC ROCKET ENGINES**  
Electron bombardment ion engine Patent  
[NASA-CASE-XNP-04124] c 28 N71-21822

**ELECTRIC SPARKS**  
Method and device for detection of a substance --- determining carbon fiber release in fire situations  
[NASA-CASE-NPO-14940-1] c 33 N83-31954

**ELECTRIC STIMULI**  
Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c 51 N78-27733

**ELECTRIC SWITCHES**  
Thermionic diode switch Patent  
[NASA-CASE-NPO-10404] c 03 N71-12255

Deflective rod switch with elastic support and sealing means Patent  
[NASA-CASE-XNP-09808] c 09 N71-12518

Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610

Plural position switch status and operativeness checker Patent  
[NASA-CASE-XLA-08799] c 10 N71-27272

Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same Patent  
[NASA-CASE-XNP-00745] c 10 N71-28960

Cyclic switch Patent  
[NASA-CASE-LEW-10155-1] c 09 N71-29035

Telemetry actuated switch  
[NASA-CASE-ARC-10105] c 09 N72-17153

Differential pressure control  
[NASA-CASE-MFS-14216] c 14 N73-13418

Fused switch  
[NASA-CASE-XMS-01244-1] c 33 N79-33393

Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418

Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356

Four quadrant control circuit for a brushless three phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N86-20682

**ELECTRIC TERMINALS**

Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c 09 N69-39734

Electrical connector for flat cables Patent  
[NASA-CASE-XMF-00324] c 09 N70-34596

Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c 15 N71-10809

Electrical spot terminal assembly Patent  
[NASA-CASE-NPO-10034] c 15 N71-17685

Resistance soldering apparatus  
[NASA-CASE-GSC-10913] c 15 N72-22491

Radio frequency filter device  
[NASA-CASE-XLA-02609] c 09 N72-25256

Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c 33 N74-26977

**ELECTRIC WELDING**

Electric welding torch Patent  
[NASA-CASE-XMF-02330] c 15 N71-23798

Butt welder for fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c 15 N73-14468

Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515

**ELECTRIC WIRE**

Wire grid forming apparatus Patent  
[NASA-CASE-XLE-00023] c 15 N70-33330

Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c 15 N71-20393

Ablation sensor Patent  
[NASA-CASE-XLA-01794] c 33 N71-21586

Resistance soldering apparatus  
[NASA-CASE-GSC-10913] c 15 N72-22491

Lead attachment to high temperature devices  
[NASA-CASE-ERC-10224] c 09 N72-25261

Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10188-1] c 33 N74-22865

Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c 33 N74-26977

High current electrical lead --- for thermionic converters  
[NASA-CASE-LEW-10950-1] c 33 N74-27683

Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419

Method and apparatus for preparing multiconductor cable with flat conductors  
[NASA-CASE-MFS-10946-1] c 31 N79-21226

Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c 31 N79-21227

Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947

**ELECTRIC ENGINEERING**

Relay binary circuit Patent  
[NASA-CASE-XMF-00421] c 09 N70-34502

Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021

**ELECTRICAL FAULTS**

Apparatus for overcurrent protection of a push-pull amplifier Patent  
[NASA-CASE-MSC-12033-1] c 09 N71-13531

Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366

Solar cell assembly test method  
[NASA-CASE-NPO-10401] c 03 N72-20033

Shared memory for a fault-tolerant computer  
[NASA-CASE-NPO-13139-1] c 60 N76-21914

Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333

**ELECTRICAL IMPEDANCE**

High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c 09 N71-19516

High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08588-1] c 09 N71-20569

Multialarm summary alarm Patent  
[NASA-CASE-XLE-03061-1] c 10 N71-24798

Signal conditioning circuit apparatus --- with constant input impedance  
[NASA-CASE-ARC-10348-1] c 33 N75-19518

Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525

Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335

**ELECTRICAL INSULATION**

Solenoid construction Patent  
[NASA-CASE-XNP-01951] c 09 N70-41929

Method and apparatus for cryogenic wire stripping Patent  
[NASA-CASE-MFS-10340] c 15 N71-17628

Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c 25 N71-21694

Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781

Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c 15 N72-25447

Bio-isolated dc operational amplifier --- for bioelectric measurements  
[NASA-CASE-ARC-10596-1] c 33 N74-21851

Stored charge transistor  
[NASA-CASE-NPO-11156-2] c 33 N75-31331

Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c 24 N75-33181

Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22587] c 36 N78-17366

Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419

**ELECTRICAL MEASUREMENT**  
Device for determining the accuracy of the flare on a flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785

Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c 09 N71-12516

Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent  
[NASA-CASE-XNP-00384] c 09 N71-13530

Apparatus for field strength measurement of a space vehicle Patent  
[NASA-CASE-XLE-00820] c 14 N71-16014

Apparatus for measuring current flow Patent  
[NASA-CASE-XGS-02439] c 14 N71-19431

High voltage divider system Patent  
[NASA-CASE-XLE-02008] c 09 N71-21583

Ablation sensor Patent  
[NASA-CASE-XLA-01794] c 33 N71-21586

Hall current measuring apparatus having a series resistor for temperature compensation Patent  
[NASA-CASE-XAC-01662] c 14 N71-23037

Connector internal force gauge Patent  
[NASA-CASE-XNP-03918] c 14 N71-23087

Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244

Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c 33 N75-26246

Rapid activation and checkout device for batteries  
[NASA-CASE-MFS-22749-1] c 44 N78-14601

Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c 33 N76-19339

Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c 33 N76-21390

Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525

Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c 33 N80-32650

Lightning discharge identification system  
[NASA-CASE-KSC-11098-1] c 47 N82-24779

Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659

**ELECTRICAL PROPERTIES**  
Drift compensation circuit for analog to digital converter Patent  
[NASA-CASE-XNP-04780] c 08 N71-19687

Electronically resettable fuse Patent  
[NASA-CASE-XGS-11177] c 09 N71-27001

Voltage regulator Patent  
[NASA-CASE-ERC-10113] c 09 N71-27053

Radiometric temperature reference Patent  
[NASA-CASE-MSC-13276-1] c 14 N71-27058

Solar cell matrix  
[NASA-CASE-NPO-11190] c 03 N71-34044

Storage battery comprising negative plates of a wedge shaped configuration --- for preventing shape change induced malfunctions  
[NASA-CASE-NPO-11806-1] c 44 N74-19693

Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c 35 N76-15434

Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437

**ELECTRICAL RESISTANCE**  
Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c 15 N72-23497

RF-source resistance meters  
[NASA-CASE-NPO-11291-1] c 14 N73-30388

Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c 33 N80-32650

Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375



## ELECTRICAL RESISTIVITY

- GaAs solar detector using manganese as a doping agent Patent  
 [NASA-CASE-XNP-01328] c 26 N71-18064  
 Thermopile vacuum gage tube simulator Patent  
 [NASA-CASE-XLA-02758] c 14 N71-18481  
 Electrically conductive fluorocarbon polymer  
 [NASA-CASE-XLE-06774-2] c 06 N72-25150  
 Electrical conductivity cell and method for fabricating the same  
 [NASA-CASE-ARC-10810-1] c 33 N76-19339  
 Durable antistatic coating for polymethylmethacrylate  
 [NASA-CASE-NPO-13867-1] c 27 N78-14164  
 Remote lightning monitor system  
 [NASA-CASE-KSC-11031-1] c 33 N79-11315  
 Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
 [NASA-CASE-MSC-12662-1] c 33 N79-12331  
 Electrically conductive thermal control coatings  
 [NASA-CASE-GSC-12207-1] c 24 N79-14156  
 Electrically conductive palladium containing polyimide films  
 [NASA-CASE-LAR-12705-1] c 25 N82-26396  
 Method of making a high voltage V-groove solar cell  
 [NASA-CASE-LEW-13401-1] c 44 N82-29709  
 Method and device for detection of a substance --- determining carbon fiber release in fire situations  
 [NASA-CASE-NPO-14940-1] c 33 N83-31954  
 Piezoelectric composite materials  
 [NASA-CASE-LEW-12582-1] c 76 N83-34796  
 Instrumentation for sensing moisture content of material using a transient thermal pulse  
 [NAS 1.71-NPO-15494-2] c 35 N85-34373

## ELECTRICITY

- Thermionic converter with current augmented by self induced magnetic field Patent  
 [NASA-CASE-XLE-01903] c 22 N71-23599  
 Improved heat exchanger for electrothermal devices  
 [NASA-CASE-LEW-14037-1] c 20 N84-32425

## ELECTRO-OPTICS

- Electro-optical scanning apparatus Patent Application  
 [NASA-CASE-NPO-11106] c 14 N70-34697  
 Electro-optical alignment control system Patent  
 [NASA-CASE-XMF-00908] c 14 N70-40238  
 Polarimeter for transient measurement Patent  
 [NASA-CASE-XNP-08883] c 23 N71-16101  
 Light direction sensor  
 [NASA-CASE-NPO-11201] c 14 N72-27409  
 Ultraportable calibrated light source  
 [NASA-CASE-MSC-12293-1] c 14 N72-27411  
 Optical conversion method --- for spacecraft television  
 [NASA-CASE-MSC-12618-1] c 74 N78-17865  
 Noncontacting method for measuring angular deflection  
 [NASA-CASE-LAR-12178-1] c 74 N80-21138  
 Optical distance measuring instrument  
 [US-PATENT-APPL-SN-406820] c 74 N83-13982  
 Miniature electrooptical air flow sensor  
 [NASA-CASE-LAR-13065-1] c 35 N85-20295  
 Photorefractor ocular screening system  
 [NASA-CASE-MFS-26011-1SB] c 52 N85-20639  
 Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
 [NASA-CASE-LAR-13100-1] c 37 N86-24993

## ELECTROACOUSTIC TRANSDUCERS

- Respiration monitor  
 [NASA-CASE-FRC-10012] c 14 N72-17329  
 Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
 [NASA-CASE-NPO-13263-1] c 12 N75-24774  
 CDS solid state phase insensitive ultrasonic transducer --- annealing dadium sulfide crystals  
 [NASA-CASE-LAR-12304-1] c 35 N80-20559

## ELECTROACOUSTIC WAVES

- Phonocardiogram simulator Patent  
 [NASA-CASE-XKS-10804] c 05 N71-24606

## ELECTROCARDIOGRAPHY

- Phonocardiogram simulator Patent  
 [NASA-CASE-XKS-10804] c 05 N71-24606  
 Ratemeter  
 [NASA-CASE-MFS-20418] c 14 N73-24473  
 Insulated electrocardiographic electrodes --- without paste electrolyte  
 [NASA-CASE-MSC-14339-1] c 05 N75-24716  
 Pocket ECG electrode  
 [NASA-CASE-ARC-11258-1] c 52 N80-33081  
 Subcutaneous electrode structure  
 [NASA-CASE-ARC-11117-1] c 52 N81-14612

## ELECTROCATALYSTS

- Electrocatalyst for oxygen reduction  
 [NASA-CASE-HQN-10537-1] c 06 N72-10138  
 Catalyst surfaces for the chromous/chromic redox couple  
 [NASA-CASE-LEW-13148-1] c 33 N80-20487

- Zirconium carbide as an electrocatalyst for the chromous-chromic redox couple  
 [NASA-CASE-LEW-13246-1] c 44 N83-27344

## ELECTROCHEMICAL CELLS

- Apparatus for measuring swelling characteristics of membranes  
 [NASA-CASE-XGS-03865] c 14 N69-21363  
 Prevention of pressure build-up in electrochemical cells Patent  
 [NASA-CASE-XGS-01419] c 03 N70-41864  
 Non-magnetic battery case Patent  
 [NASA-CASE-XGS-00886] c 03 N71-11053  
 Sealing device for an electrochemical cell Patent  
 [NASA-CASE-XGS-02630] c 03 N71-22974  
 Sealed electrochemical cell provided with a flexible casing Patent  
 [NASA-CASE-XGS-01513] c 03 N71-23336  
 Electric battery and method for operating same Patent  
 [NASA-CASE-XGS-01674] c 03 N71-29129  
 Frangible electrochemical cell  
 [NASA-CASE-XGS-10010] c 03 N72-15986  
 Porus electrode comprising a bonded stack of pieces of corrugated metal foil  
 [NASA-CASE-GSC-11368-1] c 09 N73-32108  
 Battery testing device --- for testing cells of multiple-cell battery  
 [NASA-CASE-MFS-20761-1] c 44 N74-27519  
 Electrical conductivity cell and method for fabricating the same  
 [NASA-CASE-ARC-10810-1] c 33 N76-19339  
 Multi-cell battery protection system  
 [NASA-CASE-LEW-12039-1] c 44 N78-14625  
 Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
 [NASA-CASE-LEW-12513-1] c 25 N79-22235  
 Electrochemical cell for rebalancing REDOX flow system  
 [NASA-CASE-LEW-13150-1] c 44 N79-26474  
 Catalyst surfaces for the chromous/chromic redox couple  
 [NASA-CASE-LEW-13148-1] c 33 N80-20487  
 Alkaline electrochemical cells and method of making  
 [NASA-CASE-GSC-10349-1] c 44 N82-24645  
 Method for determining the point of zero zeta potential of semiconductor  
 [NASA-CASE-LAR-12893-1] c 76 N85-30923  
 Cathode for primary battery  
 [NASA-CASE-NPO-16397-1-CU] c 33 N86-19517  
 Method and apparatus for rebalancing a REDOX flow cell system  
 [NASA-CASE-LEW-14127-1] c 33 N86-20680

## ELECTROCHEMICAL MACHINING

- Apparatus for electrolytically tapered or contoured cavities  
 [NASA-CASE-XNP-08835-1] c 37 N80-14395

## ELECTROCHEMICAL OXIDATION

- Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
 [NASA-CASE-LEW-12513-1] c 25 N79-22235  
 Epitaxial thinning process  
 [NASA-CASE-NPO-15786-1] c 76 N84-35112

## ELECTROCHEMISTRY

- Electrode for biological recording  
 [NASA-CASE-XMS-02872] c 05 N69-21925  
 Electrochemical detection device --- for use in microbiology  
 [NASA-CASE-LAR-11922-1] c 25 N79-24073

## ELECTRODE FILM BARRIERS

- Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
 [NASA-CASE-LEW-12358-1] c 44 N79-17313

## ELECTRODEPOSITION

- Method of electrolytically binding a layer of semiconductors together Patent  
 [NASA-CASE-XNP-01959] c 26 N71-23043  
 Method of producing crystalline materials  
 [NASA-CASE-NPO-10440] c 15 N72-21466  
 Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
 [NASA-CASE-MFS-21395-1] c 25 N74-26948  
 Multitarget sequential sputtering apparatus  
 [NASA-CASE-NPO-13345-1] c 37 N75-19684  
 Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
 [NASA-CASE-LEW-12513-1] c 25 N79-22235

## ELECTRODES

- Electrode and insulator with shielded dielectric junction  
 [NASA-CASE-XLE-03778] c 09 N69-21542  
 Electrode for biological recording  
 [NASA-CASE-XMS-02872] c 05 N69-21925  
 Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
 [NASA-CASE-XGS-04554] c 15 N69-39786  
 Ionization vacuum gauge Patent  
 [NASA-CASE-XNP-00646] c 14 N70-35666

- Double optic system for ion engine Patent  
 [NASA-CASE-XNP-02839] c 28 N70-41922  
 Didymium hydrate additive to nickel hydroxide electrodes Patent  
 [NASA-CASE-XGS-03505] c 03 N71-10608  
 Focussing system for an ion source having apertured electrodes Patent  
 [NASA-CASE-XNP-03332] c 09 N71-10618  
 Biomedical electrode arrangement Patent  
 [NASA-CASE-XFR-10856] c 05 N71-11189  
 Electrode construction Patent  
 [NASA-CASE-ARC-10043-1] c 05 N71-11193  
 Pressed disc type sensing electrodes with ion-screening means Patent  
 [NASA-CASE-XMS-04212-1] c 05 N71-12346  
 Method of making electrical contact on silicon solar cell and resultant product Patent  
 [NASA-CASE-XLE-04787] c 03 N71-20492  
 Arc electrode of graphite with ball tip Patent  
 [NASA-CASE-XLE-04788] c 09 N71-22987  
 Sealing member and combination thereof and method of producing said sealing member Patent  
 [NASA-CASE-XMS-01625] c 15 N71-23022  
 Automatic recording McLeod gauge Patent  
 [NASA-CASE-XLE-03280] c 14 N71-23093  
 Flexible conductive disc electrode Patent  
 [NASA-CASE-FRC-10029] c 09 N71-24618  
 Plated electrodes Patent  
 [NASA-CASE-XMS-04213-1] c 09 N71-26002  
 Method and apparatus for attaching physiological monitoring electrodes Patent  
 [NASA-CASE-XFR-07658-1] c 05 N71-26293  
 Field ionization electrodes Patent  
 [NASA-CASE-ERC-10013] c 09 N71-26678  
 Method of making a perspiration resistant biopotential electrode  
 [NASA-CASE-MSC-90153-2] c 05 N72-25120  
 Method of making dry electrodes  
 [NASA-CASE-FRC-10029-2] c 05 N72-25121  
 Compressible biomedical electrode  
 [NASA-CASE-MSC-13648] c 05 N72-27103  
 Method and apparatus for limiting field emission current  
 [NASA-CASE-ERC-10015-2] c 10 N72-27246  
 Coaxial high density, hypervelocity plasma generator and accelerator with ionizable metal disc  
 [NASA-CASE-MFS-20589] c 25 N72-32688  
 Ion thruster with a combination keeper electrode and electron baffle  
 [NASA-CASE-NPO-11880] c 28 N73-24783  
 Wide temperature range electronic device with lead attachment  
 [NASA-CASE-ERC-10224-2] c 09 N73-27150  
 Porus electrode comprising a bonded stack of pieces of corrugated metal foil  
 [NASA-CASE-GSC-11368-1] c 09 N73-32108  
 High powered arc electrodes --- producing solar simulator radiation  
 [NASA-CASE-LEW-11162-1] c 33 N74-12913  
 Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
 [NASA-CASE-GSC-11367-1] c 44 N74-19692  
 Insulated electrocardiographic electrodes --- without paste electrolyte  
 [NASA-CASE-MSC-14339-1] c 05 N75-24716  
 Readout electrode assembly for measuring biological impedance  
 [NASA-CASE-ARC-10816-1] c 35 N76-24525  
 Gels as battery separators for soluble electrode cells  
 [NASA-CASE-LEW-12364-1] c 44 N77-22606  
 Snap-in compressible biomedical electrode  
 [NASA-CASE-MSC-14623-1] c 52 N77-28717  
 Apparatus for electrolytically tapered or contoured cavities  
 [NASA-CASE-XNP-08835-1] c 37 N80-14395  
 Toroidal cell and battery --- storage battery for high amp-hour load applications  
 [NASA-CASE-LEW-12918-1] c 44 N81-24521  
 Catalyst surfaces for the chromous/chromic redox couple  
 [NASA-CASE-LEW-13148-2] c 44 N81-29524  
 Method of making formulated plastic separators for soluble electrode cells  
 [NASA-CASE-LEW-12358-2] c 25 N82-21268  
 Multistage depressed collector for dual mode operation --- for microwave transmitting tubes  
 [NASA-CASE-LEW-13282-1] c 33 N82-24415  
 Alkaline electrochemical cells and method of making  
 [NASA-CASE-GSC-10349-1] c 44 N82-24645  
 Thermionic energy converters  
 [NASA-CASE-LEW-12443-1] c 44 N83-32175  
 Photoelectrochemical electrodes  
 [NASA-CASE-NPO-15458-1] c 25 N84-12262  
 Electrodes for solid state devices  
 [NASA-CASE-NPO-15161-1] c 33 N84-16456

- Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734
- Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565
- Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212
- Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721
- Discharge cell for optogalvanic spectroscopy having orthogonal relationship between the probe laser and discharge axis  
[NASA-CASE-NPO-16271-1] c 35 N86-25753
- Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431
- ELECTRODIALYSIS**  
Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370
- ELECTROFORMING**  
Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c 20 N74-32919
- ELECTROHYDRAULIC FORMING**  
Electrical discharge apparatus for forming Patent  
[NASA-CASE-XMF-00375] c 15 N70-34249
- ELECTROHYDRODYNAMICS**  
Electrohydrodynamic control valve Patent  
[NASA-CASE-NPO-10416] c 12 N71-27332
- ELECTROKINETICS**  
Zeta potential flowmeter Patent  
[NASA-CASE-XNP-06509] c 14 N71-23226
- ELECTROLUMINESCENCE**  
Flat-panel, full-color electroluminescent display  
[NASA-CASE-LAR-13407-1] c 33 N86-24909
- ELECTROLYSIS**  
Passively regulated water electrolysis rocket engine Patent  
[NASA-CASE-XGS-08729] c 28 N71-14044
- Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904
- Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c 35 N78-25391
- ELECTROLYTES**  
Apparatus for measuring swelling characteristics of membranes  
[NASA-CASE-XGS-03865] c 14 N69-21363
- Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052
- Sealed electrochemical cell provided with a flexible casing Patent  
[NASA-CASE-XGS-01513] c 03 N71-23336
- Compressible biomedical electrode  
[NASA-CASE-MSC-13648] c 05 N72-27103
- Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N82-29710
- Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212
- ELECTROLYTIC CELLS**  
Method of making emf cell  
[NASA-CASE-LEW-11359-2] c 03 N72-20034
- Electrolytic gas operated actuator  
[NASA-CASE-NPO-11369] c 15 N73-13467
- Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c 33 N75-27252
- Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MSC-12568-1] c 24 N76-14204
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487
- Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c 28 N81-24280
- Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521
- Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N82-29710
- State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596
- ELECTROMAGNETIC ABSORPTION**  
Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741
- Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c 35 N77-14411
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c 32 N80-14281
- ELECTROMAGNETIC FIELDS**  
Tumbler system to provide random motion  
[NASA-CASE-XGS-02437] c 15 N69-21472
- Vacuum evaporator with electromagnetic ion steering Patent  
[NASA-CASE-NPO-10331] c 09 N71-26701
- Metallic intrusion detector system  
[NASA-CASE-ARC-10265-1] c 10 N72-28240
- Low power electromagnetic flowmeter providing accurate zero set  
[NASA-CASE-ARC-10362-1] c 14 N73-32326
- Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10881-1] c 35 N74-21018
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411
- ELECTROMAGNETIC HAMMERS**  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17650
- Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24833
- ELECTROMAGNETIC INTERFERENCE**  
Sealed cabinetry Patent  
[NASA-CASE-MSC-12168-1] c 09 N71-18600
- Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c 27 N77-32308
- Method and apparatus for enhancing laser absorption sensitivity  
[NASA-CASE-NPO-18567-1-CU] c 36 N86-20777
- ELECTROMAGNETIC MEASUREMENT**  
Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
[NASA-CASE-XGS-02608] c 07 N70-41678
- Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411
- Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779
- ELECTROMAGNETIC NOISE**  
Parametric amplifiers with idler circuit feedback  
[NASA-CASE-LAR-10253-1] c 09 N72-25258
- Audio system with means for reducing noise effects  
[NASA-CASE-NPO-11631] c 10 N73-12244
- Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c 32 N78-21366
- Submillimeter wave Schottky barrier diode with low series resistance and low noise  
[NASA-CASE-NPO-15935-1] c 33 N83-12334
- ELECTROMAGNETIC PROPERTIES**  
Measurement apparatus and procedure for the determination of surface emissivities  
[NASA-CASE-LAR-13455-1] c 32 N86-24880
- ELECTROMAGNETIC PROPULSION**  
Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c 09 N79-21084
- ELECTROMAGNETIC PULSES**  
Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037
- ELECTROMAGNETIC PUMPS**  
Multiducted electromagnetic pump Patent  
[NASA-CASE-NPO-10755] c 15 N71-27084
- ELECTROMAGNETIC RADIATION**  
Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063
- Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent  
[NASA-CASE-XNP-02140] c 09 N71-23097
- Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c 09 N71-24595
- Antenna design for surface wave suppression Patent  
[NASA-CASE-XLA-10772] c 07 N71-29980
- Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130
- Method and apparatus for measuring electromagnetic radiation  
[NASA-CASE-LEW-11159-1] c 14 N73-28488
- Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996
- Method and apparatus for measuring distance  
[NASA-CASE-MSC-20912-1] c 32 N86-24879
- ELECTROMAGNETIC SHIELDING**  
Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c 09 N71-28691
- Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419
- Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c 33 N81-27397
- ELECTROMAGNETIC WAVE FILTERS**  
Laser camera and diffusion filter therefore Patent  
[NASA-CASE-NPO-10417] c 16 N71-33410
- ELECTROMAGNETIC WAVE TRANSMISSION**  
Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
[NASA-CASE-XGS-02608] c 07 N70-41678
- Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952
- ELECTROMAGNETISM**  
Detenting servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067
- Linear magnetic bearings  
[NASA-CASE-GSC-12582-2] c 37 N85-20337
- ELECTROMAGNETS**  
Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461
- Solenoid construction Patent  
[NASA-CASE-XNP-01951] c 09 N70-41929
- Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c 23 N71-16099
- Safe-arm initiator Patent  
[NASA-CASE-LAR-10372] c 09 N71-18599
- Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c 37 N75-18574
- Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- ELECTROMECHANICAL DEVICES**  
Electromechanical actuator  
[NASA-CASE-XNP-05975] c 15 N69-23185
- Bi-metallic power controlled actuator  
[NASA-CASE-XNP-09776] c 09 N69-39929
- Apparatus for coupling a plurality of ungrounded circuits to a grounded circuit Patent  
[NASA-CASE-XAC-00086] c 09 N70-33182
- Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent  
[NASA-CASE-XGS-03532] c 14 N71-17627
- Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c 15 N71-24045
- Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490
- Electromechanical control actuator system Patent  
[NASA-CASE-ERC-10022] c 15 N71-26635
- Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334
- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-10503-1] c 09 N72-21248
- Ferrofluidic solenoid  
[NASA-CASE-NPO-11738-1] c 09 N73-30185
- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c 33 N77-26387
- Rotary electric device  
[NASA-CASE-GSC-12138-1] c 33 N79-20314
- Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423
- Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c 43 N80-23711
- Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569
- Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796
- Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928
- Electro-expulsive separation system  
[NASA-CASE-ARC-11613-1] c 33 N85-29150
- Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19604
- ELECTROMETERS**  
Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659
- ELECTROMIGRATION**  
Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105
- ELECTROMOTIVE FORCES**  
Heat activated cell Patent  
[NASA-CASE-LEW-11359] c 03 N71-28579
- Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661



**ELECTRON ATTACHMENT**

High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877

**ELECTRON BEAM WELDING**

Split welding chamber Patent  
[NASA-CASE-LEW-11531] c 15 N71-14932  
Device for preventing high voltage arcing in electron beam welding Patent  
[NASA-CASE-XMF-08522] c 15 N71-19486

**ELECTRON BEAMS**

Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451] c 09 N71-10677  
Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539  
Electron beam instrument for measuring electric fields Patent  
[NASA-CASE-XMF-10289] c 14 N71-23699  
Apparatus for determining the deflection of an electron beam impinging on a target Patent  
[NASA-CASE-XMF-06617] c 09 N71-24843  
Infrared detectors  
[NASA-CASE-LAR-10728-1] c 14 N73-12445  
Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c 33 N74-10195  
Image tube --- deriving electron beam replica of image  
[NASA-CASE-GSC-11602-1] c 33 N74-21850  
Very high intensity light source using a cathode ray tube --- electron beams  
[NASA-CASE-XNP-01296] c 33 N75-27250  
Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N80-19425  
Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444

**ELECTRON BOMBARDMENT**

Ion thruster cathode  
[NASA-CASE-XLE-07087] c 06 N69-39889  
Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope  
[NASA-CASE-XGS-01725] c 14 N69-39982  
Electron bombardment ion engine Patent  
[NASA-CASE-XNP-04124] c 28 N71-21822  
Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
[NASA-CASE-XLE-04501] c 09 N71-23190  
Single grid accelerator for an ion thruster  
[NASA-CASE-XLE-10453-2] c 28 N73-27699  
Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c 35 N81-19426  
Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170  
Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695  
Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565  
Apparatus and furnace for containerless processing of high temperature materials in space  
[NASA-CASE-MFS-28087-1] c 35 N86-23899

**ELECTRON CAPTURE**

Multistage depressed collector for dual mode operation --- for microwave transmitting tubes  
[NASA-CASE-LEW-13282-1] c 33 N82-24415

**ELECTRON DISTRIBUTION**

Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156

**ELECTRON EMISSION**

Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898  
Textured carbon surfaces on copper  
[NASA-CASE-LEW-14130-1] c 31 N85-20156  
Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587

**ELECTRON ENERGY**

Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444

**ELECTRON FLUX DENSITY**

Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope  
[NASA-CASE-XGS-01725] c 14 N69-39982

**ELECTRON GUNS**

Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083  
Generation of intense negative ion beams  
[NASA-CASE-NPO-18061-1-CU] c 72 N85-29701

**ELECTRON IRRADIATION**

Ion rocket Patent  
[NASA-CASE-XLE-00376] c 28 N70-37245

**ELECTRON MICROSCOPES**

Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope  
[NASA-CASE-XGS-01725] c 14 N69-39982  
Method of forming aperture plate for electron microscope  
[NASA-CASE-ARC-10448-2] c 74 N75-12732  
Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408

**ELECTRON MICROSCOPY**

Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996

**ELECTRON OSCILLATIONS**

Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N86-20679

**ELECTRON PHOTON CASCADES**

Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473

**ELECTRON PLASMA**

Method and apparatus for producing a plasma Patent  
[NASA-CASE-XLA-00147] c 25 N70-34661

**ELECTRON SOURCES**

Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408

**ELECTRON TRANSFER**

Process for reducing secondary electron emission Patent  
[NASA-CASE-XNP-09469] c 24 N71-25555

**ELECTRON TRANSITIONS**

Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426

**ELECTRON TUBES**

Direct radiation cooling of the collector of linear beam tubes  
[NASA-CASE-XNP-09227] c 15 N69-24319  
Radiant heater having formed filaments Patent  
[NASA-CASE-XLE-00387] c 33 N70-34812  
Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117  
Gyrotion transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952

**ELECTRON TUNNELING**

Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c 33 N75-31332  
Inelastic tunnel diodes  
[NASA-CASE-LEW-13833-1] c 33 N85-21492

**ELECTRONIC CONTROL**

Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460  
Electronic motor control system Patent  
[NASA-CASE-XMF-01129] c 09 N70-38712  
Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142  
Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173  
Peak acceleration limiter for vibrational tester Patent  
[NASA-CASE-NPO-10556] c 14 N71-27185  
Digital control and information system  
[NASA-CASE-NPO-11016] c 08 N72-31226  
Electronic system for high power load control --- solar arrays  
[NASA-CASE-NPO-15358-1] c 33 N83-27126  
Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142

**ELECTRONIC EQUIPMENT**

Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460  
Pulse activated polarographic hydrogen detector Patent  
[NASA-CASE-XMF-06531] c 14 N71-17575  
Stable amplifier having a stable quiescent point Patent  
[NASA-CASE-XGS-02812] c 09 N71-19466  
Static inverter Patent  
[NASA-CASE-XGS-05289] c 09 N71-19470  
Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent  
[NASA-CASE-XNP-02140] c 09 N71-23097  
Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740] c 07 N71-23098  
Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
[NASA-CASE-XLE-04501] c 09 N71-23190  
Method and apparatus for varying thermal conductivity Patent  
[NASA-CASE-XNP-05524] c 33 N71-24876  
A solid state acoustic variable time delay line Patent  
[NASA-CASE-ERC-10032] c 10 N71-25900  
Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244

Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215  
Temperature regulation circuit Patent  
[NASA-CASE-XNP-02792] c 14 N71-28958  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171  
Universal environment package with sectional component housing  
[NASA-CASE-KSC-10031] c 15 N72-22486  
Lead attachment to high temperature devices  
[NASA-CASE-ERC-10224] c 09 N72-25261  
Method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c 15 N72-25457  
Versatile arithmetic unit for high speed sequential decoder  
[NASA-CASE-NPO-11371] c 08 N73-12177  
Data processor with conditionally supplied clock signals  
[NASA-CASE-GSC-10975-1] c 08 N73-13187  
Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428  
Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c 10 N73-16206  
Junction range finder  
[NASA-CASE-KSC-10108] c 14 N73-25461  
Electronic strain-level counter  
[NASA-CASE-LAR-10756-1] c 32 N73-26910  
Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c 32 N74-12912  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014  
Electronic analog divider  
[NASA-CASE-LEW-11881-1] c 33 N77-17354  
Moisture content and gas sampling device  
[NASA-CASE-MSC-18866-1] c 35 N85-29213

**ELECTRONIC EQUIPMENT TESTS**

Analog to digital converter tester Patent  
[NASA-CASE-XLA-06713] c 14 N71-28991  
Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c 35 N75-12270  
Decommutator patchboard verifier  
[NASA-CASE-KSC-11065-1] c 33 N81-26359  
Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996

**ELECTRONIC FILTERS**

Self-tuning bandpass filter  
[NASA-CASE-ARC-10264-1] c 09 N73-20231  
Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c 33 N74-32712  
Notch filter  
[NASA-CASE-MFS-23303-1] c 32 N77-18307

**ELECTRONIC MODULES**

Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717  
Solar cell submodule Patent  
[NASA-CASE-XNP-05821] c 03 N71-11056  
Heat conductive resiliently compressible structure for space electronics package modules Patent  
[NASA-CASE-MSC-12389] c 33 N71-29052  
Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918  
Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c 33 N77-30365  
Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c 44 N78-25528  
Electronically scanned pressure sensor module with in situ calibration capability  
[NASA-CASE-LAR-12230-1] c 35 N79-14347  
Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254  
Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257  
Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389  
Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706

**ELECTRONIC PACKAGING**  
Electrical feed-through connection for printed circuit boards and printed cable  
[NASA-CASE-XMF-01483] c 14 N69-27431  
Capacitor and method of making same Patent  
[NASA-CASE-LEW-10364-1] c 09 N71-13522  
Method of evaluating moisture barrier properties of encapsulating materials Patent  
[NASA-CASE-NPO-10051] c 18 N71-24934  
Microelectronic module package Patent  
[NASA-CASE-XMS-02182] c 10 N71-28783

- Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c 03 N72-15986
- Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c 15 N73-14469
- Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c 10 N73-25243
- Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c 33 N74-12951
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918
- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c 37 N79-33467
- Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839
- Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MSC-20181-1] c 33 N82-28549
- Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- ELECTRONIC RECORDING SYSTEMS**  
Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339
- ELECTRONIC TRANSDUCERS**  
Fiber optic vibration transducer and analyzer Patent  
[NASA-CASE-XMF-02433] c 14 N71-10616
- Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597
- Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366
- Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c 35 N80-18359
- Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- ELECTRONS**  
Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767
- ELECTROPHORESIS**  
Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
[NASA-CASE-MFS-21395-1] c 25 N74-26948
- Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744
- Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c 25 N78-14104
- Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c 25 N79-10163
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c 25 N79-14169
- Electrophoretic fractional elution apparatus employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c 37 N80-14397
- Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c 51 N80-16715
- Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126
- Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187
- ELECTROPHOTOMETERS**  
Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993
- ELECTROPHYSIOLOGY**  
Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c 09 N71-24618
- ELECTROPLATING**  
Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c 17 N71-25903
- Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c 09 N71-28691
- Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c 17 N73-24569
- Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524
- Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388
- ELECTROSTATIC CHARGE**  
Electrostatic charged particle analyzer having deflection members shaped according to the periodic voltage applied thereto Patent  
[NASA-CASE-XAC-05506-1] c 24 N71-16095
- Electrostatic measurement system --- for contact-electrifying a dielectric  
[NASA-CASE-MFS-22129-1] c 33 N75-18477
- Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- ELECTROSTATIC ENGINES**  
Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c 28 N70-33265
- Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422
- Ion rocket Patent  
[NASA-CASE-XLE-00376] c 28 N70-37245
- Electrostatic ion rocket engine Patent  
[NASA-CASE-XLE-02066] c 28 N71-15661
- Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N85-20248
- ELECTROSTATIC GENERATORS**  
Electrostatic plasma modulator for space vehicle re-entry communication Patent  
[NASA-CASE-XLA-01400] c 07 N70-41331
- Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142
- ELECTROSTATIC PRECIPITATORS**  
Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c 35 N79-17192
- Small conductive particle sensor --- microfiber size determination  
[NASA-CASE-LAR-12552-1] c 35 N82-11431
- ELECTROSTATIC PROBES**  
Apparatus for field strength measurement of a space vehicle Patent  
[NASA-CASE-XLE-00820] c 14 N71-18014
- Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572
- ELECTROSTATIC PROPULSION**  
Electrostatic thruster with improved insulators Patent  
[NASA-CASE-XLE-01902] c 28 N71-10574
- Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213
- ELECTROSTATIC SHIELDING**  
Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c 20 N77-10148
- Shielded conductor cable system  
[NASA-CASE-MSC-12745-1] c 33 N81-27397
- High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146
- ELECTROSTATICS**  
Controllable high voltage source having fast settling time  
[NASA-CASE-GSC-11844-1] c 33 N75-19522
- ELECTROTHERMAL ENGINES**  
Electro-thermal rocket Patent  
[NASA-CASE-XLE-00267] c 28 N70-33356
- Electrothermal rockets having improved heat exchangers Patent  
[NASA-CASE-XLE-01783] c 28 N70-34175
- Improved heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N84-32425
- ELEVATION**  
Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627
- Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067
- Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N83-28281
- ELEVATORS (LIFTS)**  
Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815
- Cable stabilizer for open shaft cable operated elevators  
[NASA-CASE-KSC-10513] c 15 N72-25453
- ELEVONS**  
High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088
- ELLIPSES**  
Ellipsograph for pantograph Patent  
[NASA-CASE-XLA-03102] c 14 N71-21079
- ELLIPSOIDMETERS**  
Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529
- ELONGATION**  
Strain gauge measuring techniques Patent  
[NASA-CASE-XGS-04478] c 14 N71-24233
- Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c 35 N77-22449
- ELUTION**  
Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844
- Electrophoretic fractional elution apparatus employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c 37 N80-14397
- EMERGENCIES**  
Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205
- Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c 54 N78-18761
- EMERGENCY BREATHING TECHNIQUES**  
Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922
- EMERGENCY LIFE SUSTAINING SYSTEMS**  
Orbital escape device Patent  
[NASA-CASE-MSC-06162] c 31 N71-28851
- Emergency lunar communications system  
[NASA-CASE-MFS-21042] c 07 N72-25171
- Emergency descent device  
[NASA-CASE-MFS-23074-1] c 54 N77-21844
- Personnel emergency carrier vehicle  
[NASA-CASE-KSC-11282-1] c 85 N86-22452
- EMERGENCY LOCATOR TRANSMITTERS**  
Improved legislated emergency locating transmitters and emergency position indicating radio beacons  
[NASA-CASE-GSC-12892-1] c 32 N85-20226
- EMISSION SPECTRA**  
Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871
- EMITTANCE**  
Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875
- EMITTERS**  
Coaxial inverted geometry transistor having buried emitter  
[NASA-CASE-ARC-10330-1] c 09 N73-32112
- EMULSIONS**  
Apparatus for obtaining isotropic irradiation of a specimen  
[NASA-CASE-MFS-20095] c 24 N72-11595
- ENAMELS**  
Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160
- ENCAPSULATING**  
Bacteriostatic conformal coating and methods of application Patent  
[NASA-CASE-GSC-10007] c 18 N71-18046
- Flexible, repairable, pottable material for electrical connectors Patent  
[NASA-CASE-XGS-05180] c 18 N71-25881
- Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992
- Solar cell matrix  
[NASA-CASE-NPO-11190] c 03 N71-34044
- Method of making encapsulated solar cell modules  
[NASA-CASE-LEW-12185-1] c 44 N78-25528
- ENCLOSURES**  
Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436
- Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c 37 N78-13364
- Moisture content and gas sampling device  
[NASA-CASE-MSC-18866-1] c 35 N85-29213
- END EFFECTORS**  
Apparatus for adapting an end effector device remotely controlled manipulator arm  
[NASA-CASE-MFS-25949-1] c 37 N86-19603
- Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789
- ENDOSCOPES**  
Borescope with variable angle scope  
[NASA-CASE-MFS-15162] c 14 N72-32452
- Apparatus for endoscopic examination --- analysis of the propulsion system configuration and transmitter  
[NASA-CASE-NPO-14092-1] c 52 N80-16725
- ENDOTHERMIC REACTIONS**  
Ablation sensor  
[NASA-CASE-XLA-01781] c 14 N69-39975
- ENEMY PERSONNEL**  
Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25160
- ENERGY ABSORPTION**  
Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861
- Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c 15 N70-35679
- Apparatus for absorbing and measuring power Patent  
[NASA-CASE-XLE-00720] c 14 N70-40201
- Shock absorber Patent  
[NASA-CASE-XMS-03722] c 15 N71-21530
- Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877
- Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146
- Energy absorption device Patent  
[NASA-CASE-XNP-01848] c 15 N71-28959

- Impact energy absorbing system utilizing fractureable material  
[NASA-CASE-NPO-10671-1] c 15 N72-20443
- Docking structure for spacecraft  
[NASA-CASE-MFS-20863] c 31 N73-26876
- Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c 15 N73-30460
- ENERGY CONSERVATION**
- Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c 15 N75-13007
- Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N86-20396
- ENERGY CONSUMPTION**
- Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709
- ENERGY CONVERSION**
- Two-fluid magnetohydrodynamic system and method for thermal-electric power conversion Patent  
[NASA-CASE-XNP-00644] c 03 N70-36803
- Device for directionally controlling electromagnetic radiation Patent  
[NASA-CASE-XLE-01716] c 09 N70-40234
- Electromagnetic wave energy converter  
[NASA-CASE-GSC-11394-1] c 09 N73-32109
- Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524
- Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c 37 N77-12402
- Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c 44 N77-32581
- Solar energy collection system  
[NASA-CASE-NPO-13810-1] c 44 N77-32582
- ENERGY CONVERSION EFFICIENCY**
- Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898
- Energy conversion apparatus Patent  
[NASA-CASE-XLE-00212] c 03 N70-34134
- Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c 09 N71-10798
- Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c 44 N78-24608
- Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c 44 N79-26475
- Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c 44 N80-14472
- Efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c 44 N82-26777
- Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175
- Bi-directional control system for energy flow in a solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N84-32913
- ENERGY DISSIPATION**
- Frangible tube energy dissipation Patent  
[NASA-CASE-XLA-00754] c 15 N70-34850
- Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c 02 N77-10001
- Motion restraining device  
[NASA-CASE-NPO-13619-1] c 37 N78-16369
- ENERGY DISTRIBUTION**
- Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994
- ENERGY GAPS (SOLID STATE)**
- Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-163371-1] c 33 N85-20251
- High band GaP 3-5 tunneling junction for silicon multi-junction solar cells  
[NASA-CASE-NPO-16526-1CU] c 44 N86-21981
- ENERGY LEVELS**
- High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877
- Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444
- ENERGY POLICY**
- Solar energy power system  
[NASA-CASE-MFS-21628-2] c 44 N76-23675
- Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c 44 N76-31667
- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401
- Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933
- Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c 44 N77-32580
- Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599
- Solar pond  
[NASA-CASE-NPO-13581-2] c 44 N78-31525
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526
- Coal desulfurization process  
[NASA-CASE-NPO-13937-1] c 44 N78-31527
- Primary reflector for solar energy collection systems  
[NASA-CASE-NPO-13579-4] c 44 N79-14529
- Primary reflector for solar energy collection systems and method of making same  
[NASA-CASE-NPO-13579-3] c 44 N79-24432
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c 44 N79-24433
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c 44 N80-20810
- Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c 44 N80-21828
- Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c 44 N80-29835
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558
- Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475
- Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255
- ENERGY SOURCES**
- Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311
- Controllable high voltage source having fast settling time  
[NASA-CASE-GSC-11844-1] c 33 N75-19522
- Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c 07 N81-27096
- ENERGY STORAGE**
- Switching mechanism with energy storage means Patent  
[NASA-CASE-XGS-00473] c 03 N70-38713
- Stored charge transistor  
[NASA-CASE-NPO-11156-2] c 33 N75-31331
- Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c 52 N78-10686
- Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c 44 N78-24608
- Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c 37 N79-10422
- Combined solar collector and energy storage system  
[NASA-CASE-LAR-12205-1] c 44 N80-20810
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103
- Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721
- ENERGY TECHNOLOGY**
- Solar energy collection system  
[NASA-CASE-NPO-13810-1] c 44 N77-32582
- Method for producing solar energy panels by automation  
[NASA-CASE-LEW-12541-1] c 44 N78-25529
- Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526
- Surfactant-assisted liquefaction of carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152
- Back wall solar cell  
[NASA-CASE-LEW-12236-2] c 44 N79-14528
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c 44 N79-19447
- Solar energy collection system  
[NASA-CASE-NPO-13579-2] c 44 N79-24433
- Solar concentrator  
[NASA-CASE-MFS-23727-1] c 44 N80-14473
- Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474
- Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-1] c 28 N84-29017
- ENERGY TRANSFER**
- Solar energy absorber  
[NASA-CASE-MFS-22743-1] c 44 N76-22657
- ENGINE ANALYZERS**
- Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c 35 N79-14345
- ENGINE CONTROL**
- Regenerative braking system Patent  
[NASA-CASE-XMF-01096] c 10 N71-16030
- Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930
- Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318
- Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115
- Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- ENGINE COOLANTS**
- Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535
- Injector for bipropellant rocket engines Patent  
[NASA-CASE-XMF-00148] c 28 N70-38710
- ENGINE DESIGN**
- Gas turbine combustion apparatus Patent  
[NASA-CASE-XLE-103477-1] c 28 N71-20330
- Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081
- Space vehicle system  
[NASA-CASE-MSC-12561-1] c 18 N76-17185
- Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179
- Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526
- Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039
- Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432
- Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370
- Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640
- ENGINE FAILURE**
- System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518
- Airplane automatic control force trimming device for asymmetric engine failures  
[NASA-CASE-LAR-13280-1] c 08 N86-20397
- ENGINE INLETS**
- Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270
- The engine air intake system  
[NASA-CASE-ARC-10761-1] c 07 N77-18154
- Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976
- ENGINE MONITORING INSTRUMENTS**
- System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518
- ENGINE NOISE**
- Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270
- Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055
- Multiple pure tone elimination strut assembly --- air breathing engines  
[NASA-CASE-FRC-11062-1] c 71 N82-16800
- Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884
- ENGINE PARTS**
- Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c 07 N78-17056
- Gas path seal  
[NASA-CASE-NPO-12131-3] c 37 N80-18400
- Method of protecting a surface with a silicon-slurry/aluminate coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441
- Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N86-32740
- ENGINE STARTERS**
- Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599
- ENGINE TESTS**
- Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c 11 N70-34844
- ENGINEERING DRAWINGS**
- High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817
- Lifting body Patent Application  
[NASA-CASE-FRC-10063] c 01 N71-12217
- Optical communications system Patent  
[NASA-CASE-XLA-01090] c 07 N71-12389
- Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986

## ENTHALPY

Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent [NASA-CASE-XLE-00266] c 14 N70-34156

## ENTRAINMENT

Water separator [NASA-CASE-XMS-01295-1] c 37 N79-21345

## ENUMERATION

Apparatus and process for microbial detection and enumeration [NASA-CASE-LAR-12709-1] c 35 N82-28604

## ENVIRONMENT SIMULATION

Skeletal stressing method and apparatus Patent [NASA-CASE-ARC-10100-1] c 05 N71-24738

Locomotion and restraint aid Patent [NASA-CASE-ARC-10153] c 05 N71-28619

## ENVIRONMENT SIMULATORS

Space simulator Patent [NASA-CASE-NPO-10141] c 11 N71-24964

## ENVIRONMENTAL CONTROL

Portable environmental control system Patent [NASA-CASE-XMS-09632-1] c 05 N71-11203

Portable superclean air column device Patent [NASA-CASE-XMF-03212] c 15 N71-22721

Thermal control panel Patent [NASA-CASE-XLA-07728] c 33 N71-22890

Dual solid cryogenics for spacecraft refrigeration Patent [NASA-CASE-GSC-10188-1] c 23 N71-24725

Active vibration isolator for flexible bodies Patent [NASA-CASE-LAR-10106-1] c 15 N71-27189

Autoignition test cell Patent [NASA-CASE-KSC-10198] c 11 N71-28629

Universal environment package with sectional component housing [NASA-CASE-KSC-10031] c 15 N72-22486

Air conditioned suit [NASA-CASE-LAR-10076-1] c 05 N73-20137

Dual stage check valve [NASA-CASE-MSC-13587-1] c 15 N73-30459

Space vehicle with artificial gravity and earth-like environment [NASA-CASE-LEW-11101-1] c 31 N73-32750

## ENVIRONMENTAL ENGINEERING

Thermal control wall panel Patent [NASA-CASE-XLA-01243] c 33 N71-22792

## ENVIRONMENTAL MONITORING

System for real-time crustal deformation monitoring [NASA-CASE-NPO-14124-1] c 46 N80-14603

## ENVIRONMENTAL TESTS

Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent [NASA-CASE-XMS-02930] c 11 N71-23042

Hard space suit Patent [NASA-CASE-XAC-07043] c 05 N71-23161

Flammability test chamber Patent [NASA-CASE-KSC-10126] c 11 N71-24985

Multi axes vibration fixtures [NASA-CASE-MFS-20242] c 14 N73-19421

Fixture for environmental exposure of structural materials under compression load [NASA-CASE-LAR-12602-1] c 39 N83-32081

## ENVIRONMENTS

Hermetically sealed elbow actuator [NASA-CASE-MFS-14710] c 09 N72-22195

## ENZYMES

Use of the enzyme hexokinase for the reduction of inherent light levels [NASA-CASE-XGS-05533] c 04 N69-27487

Method of detecting and counting bacteria in body fluids [NASA-CASE-GSC-11092-2] c 04 N73-27052

## ENZYMES

Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves [NASA-CASE-GSC-10225-1] c 06 N73-27086

## EPICTYLOIDS

Sequencing device utilizing planetary gear set [NASA-CASE-MSC-19514-1] c 37 N79-20377

## EPITAXY

Method for the preparation of inorganic single crystal and polycrystalline electronic materials [NASA-CASE-XLE-02545-1] c 76 N79-21910

Method of making macrocrystalline or single crystal semiconductor material and products produced thereby --- epitaxial substrates using low melting materials for photovoltaic cells [NASA-CASE-NPO-15904-1] c 76 N83-21993

Epitaxial thinning process [NASA-CASE-NPO-15786-1] c 76 N84-35112

Low stress semiconductor-insulator interface for cryogenic device applications [NASA-CASE-NPO-16394-1] c 76 N85-20906

Floating emitter solar cell junction transistor [NASA-CASE-NPO-16467-1-CU] c 33 N86-24908

Method of making macrocrystalline or single crystal semiconductor material [NASA-CASE-NPO-15904-1] c 76 N86-28760

## EPOXY COMPOUNDS

Synthesis of siloxane-containing epoxy polymers Patent [NASA-CASE-MFS-13994-1] c 06 N71-11240

Siloxane containing epoxide compounds [NASA-CASE-MFS-13994-2] c 06 N72-25148

Fire protection covering for small diameter missiles [NASA-CASE-ARC-11104-1] c 15 N79-26100

Antenna grout replacement system [NASA-CASE-NPO-15202-1] c 27 N83-34043

Toughening reinforced epoxy composites with brominated polymeric additives [NASA-CASE-ARC-11427-2] c 27 N86-27451

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Method of repairing discontinuity in fiberglass structures [NASA-CASE-LAR-10416-1] c 24 N74-30001

Transparent fire resistant polymeric structures [NASA-CASE-ARC-10813-1] c 27 N76-16230

Curing agent for polyepoxides and epoxy resins and composites cured therewith --- preventing carbon fiber release [NASA-CASE-LEW-13226-1] c 27 N81-17260

Method of neutralizing the corrosive surface of amine-cured epoxy resins [NASA-CASE-GSC-12686-1] c 27 N83-34039

Fluoroether modified epoxy composites [NASA-CASE-ARC-11418-1] c 24 N84-11213

Process for improving mechanical properties of epoxy resins by addition of cobalt ions [NASA-CASE-LAR-13230-1] c 24 N84-34571

Metal (2,4,4',4'') phthalocyanine tetraamines as curing agents for epoxy resins [NASA-CASE-ARC-11424-1] c 27 N85-34281

Process for improving moisture resistance of epoxy resins by addition of chromium ions [NASA-CASE-LAR-13226-1] c 27 N85-34282

Toughening reinforced epoxy composites with brominated polymeric additives [NASA-CASE-ARC-11427-1] c 24 N86-19380

Aminophenoxycyclophosphazene cured epoxy resins and the composites, laminates and structures thereof [NASA-CASE-ARC-11548-1] c 27 N86-21686

EQUATIONS OF MOTION

Kinesimetric method and apparatus [NASA-CASE-MSC-18929-1] c 39 N83-20280

EQUIPMENT

Bimetallic fluid displacement apparatus --- for stirring and heating stored gases and liquids [NASA-CASE-ARC-10441-1] c 35 N74-15126

Apparatus for supplying conditioned air at a substantially constant temperature and humidity [NASA-CASE-GSC-12191-1] c 31 N80-32583

Airborne tracking Sun photometer apparatus and system [NASA-CASE-ARC-11622-1] c 44 N86-21982

EQUIPMENT SPECIFICATIONS

Differential pressure cell Patent [NASA-CASE-XAC-00042] c 14 N70-34816

High-temperature, high-pressure spherical segment valve Patent [NASA-CASE-XAC-00074] c 15 N70-34817

Optical torque meter Patent [NASA-CASE-XLE-00503] c 14 N70-34818

Magnetically centered liquid column float Patent [NASA-CASE-XAC-00030] c 14 N70-34820

Electric propulsion engine test chamber Patent [NASA-CASE-XLE-00252] c 11 N70-34844

Channel-type shell construction for rocket engines and the like Patent [NASA-CASE-XLE-00144] c 28 N70-34860

Non-reusable kinetic energy absorber Patent [NASA-CASE-XLE-00810] c 15 N70-34861

Silt regulated gas journal bearing Patent [NASA-CASE-XNP-00476] c 15 N70-38620

Optical communications system Patent [NASA-CASE-XLA-01090] c 07 N71-12389

Stretcher Patent [NASA-CASE-XMF-06588] c 05 N71-23159

Rocket thrust throttling system [NASA-CASE-LEW-10374-1] c 28 N73-13773

Process for making diamonds [NASA-CASE-MFS-20698-2] c 15 N73-19457

Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature [NASA-CASE-LAR-10426-1] c 09 N74-19528

Apparatus for conducting flow electrophoresis in the substantial absence of gravity [NASA-CASE-MFS-21394-1] c 34 N74-27744

Thermocouple tape --- developed from thermoelectrically different metals [NASA-CASE-LEW-11072-2] c 35 N76-15434

Field effect transistor and method of construction thereof [NASA-CASE-MFS-23312-1] c 33 N78-27326

Constant magnification optical tracking system [NASA-CASE-NPO-14813-1] c 74 N82-24072

EQUIPOTENTIALS

Equipotential space suit Patent [NASA-CASE-LAR-10007-1] c 05 N71-11195

Instrument for measuring potentials on two dimensional electric field plots Patent [NASA-CASE-XLA-08493] c 10 N71-19421

ERGOMETERS

Restraint system for ergometer [NASA-CASE-MFS-21046-1] c 14 N73-27377

Ergometer [NASA-CASE-MFS-21109-1] c 05 N73-27941

Tilting table for ergometer and for other biomedical devices [NASA-CASE-MFS-21010-1] c 05 N73-30078

Foot pedal operated fluid type exercising device [NASA-CASE-MSC-11561-1] c 05 N73-32014

Ergometer calibrator --- for any ergometer utilizing rotating shaft [NASA-CASE-MFS-21045-1] c 35 N75-15932

EROSION

Thermal shock and erosion resistant tantalum carbide ceramic material [NASA-CASE-LAR-11902-1] c 27 N78-17206

ERROR ANALYSIS

Program for computer aided reliability estimation [NASA-CASE-NPO-13086-1] c 15 N73-12495

Bit error rate measurement above and below bit rate tracking threshold [NASA-CASE-MSC-12743-1] c 32 N79-10263

ERROR CORRECTING CODES

Error correction method and apparatus for electronic timepieces [NASA-CASE-LAR-12654-1] c 33 N83-36357

Self-correcting electronically scanned pressure sensor [NASA-CASE-LAR-12686-1] c 35 N84-14491

Processing circuit with asymmetry corrector and convolutional encoder for digital data [NASA-CASE-MSC-20187-1] c 33 N85-20249

Reed-Solomon decoder --- applicable to Galileo Project requirements [NASA-CASE-NPO-15982-1] c 60 N85-20680

ERROR CORRECTING DEVICES

Automatic fault correction system for parallel signal channels Patent [NASA-CASE-XNP-03263] c 09 N71-18843

Elimination of frequency shift in a multiplex communication system Patent [NASA-CASE-XNP-01308] c 07 N71-20814

Error correcting method and apparatus Patent [NASA-CASE-XNP-02748] c 08 N71-22749

Failure detection and control means for improved drift performance of a gimbaled platform system [NASA-CASE-MFS-23551-1] c 04 N76-26175

Guide for a typewriter [NASA-CASE-MFS-15218-1] c 37 N77-19457

ERROR DETECTION CODES

Self-testing and repairing computer Patent [NASA-CASE-NPO-10567] c 08 N71-24633

ERROR SIGNALS

Automatic fault correction system for parallel signal channels Patent [NASA-CASE-XNP-03263] c 09 N71-18843

Sampled data controller Patent [NASA-CASE-GSC-10554-1] c 08 N71-29033

Bit error rate measurement above and below bit rate tracking threshold [NASA-CASE-MSC-12743-1] c 32 N79-10263

Apparatus and method for tracking the fundamental frequency of an analog input signal [NASA-CASE-ARC-11367-1] c 33 N83-21238

Triac failure detector [NASA-CASE-MFS-25607-1] c 33 N83-34190

Comparator with noise suppression [NASA-CASE-LAR-13151-1] c 33 N85-20247

Automated weld torch guidance control system [NASA-CASE-MFS-25807-2] c 37 N86-21850

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Analog-to-digital converter [NASA-CASE-MSC-13110-1] c 08 N72-22163

- Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138
- ESCAPE CAPSULES**
- Aerial capsule emergency separation device Patent  
[NASA-CASE-XLA-00115] c 03 N70-33343
- Emergency escape system Patent  
[NASA-CASE-XKS-02342] c 05 N71-11199
- Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859
- ESCAPE SYSTEMS**
- Emergency escape system Patent  
[NASA-CASE-MSC-12086-1] c 05 N71-12345
- Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067
- Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992
- ESCHERICHIA**
- Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849
- ESTERS**
- Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098
- ETCHING**
- Masking device Patent  
[NASA-CASE-XNP-02092] c 15 N70-42033
- Method for etching copper Patent  
[NASA-CASE-XGS-06306] c 17 N71-16044
- High resolution developing of photosensitive resists  
Patent  
[NASA-CASE-XGS-04993] c 14 N71-17574
- Etching of aluminum for bonding Patent  
[NASA-CASE-XMF-02303] c 17 N71-23828
- Selective plating of etched circuits without removing  
previous plating Patent  
[NASA-CASE-XGS-03120] c 15 N71-24047
- Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830
- Scanning nozzle plating system --- for etching or plating  
metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c 31 N74-23065
- Method for applying photographic resists to otherwise  
incompatible substrates  
[NASA-CASE-MSC-18107-1] c 27 N81-25209
- Method of making V-MOS field effect transistors utilizing  
a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c 33 N81-26360
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441
- Controlled in situ etch-back  
[NASA-CASE-NPO-15625-1] c 76 N83-20789
- Method of making an ion beam sputter-etched  
ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095
- Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N86-20587
- ETHANE**
- The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for  
their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- ETHERS**
- Method of producing alternating ether siloxane  
copolymers Patent  
[NASA-CASE-XMF-02584] c 06 N71-20905
- Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254
- Polyurethane resins from hydroxy terminated perfluoro  
ethers  
[NASA-CASE-NPO-10768-2] c 06 N72-27144
- Process of treating cellulosic membrane and alkaline  
with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641
- Separator for alkaline electric cells and method of  
making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643
- Perfluoro (Imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582
- Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526
- ETHYL COMPOUNDS**
- Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491
- Ethynyl and substituted ethynyl-terminated  
polysulfones  
[NASA-CASE-LAR-12931-1] c 27 N84-22747
- ETHYLENE OXIDE**
- Process for preparing sterile solid propellants Patent  
[NASA-CASE-XNP-01749] c 27 N70-41897
- Processing for producing a sterilized instrument  
Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461
- System for sterilizing objects --- cleaning space vehicle  
systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724

**EUTECTIC ALLOYS**

- Bonding of sapphire to sapphire by eutectic mixture of  
aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992
- Method of growing composites of the type exhibiting  
the Soret effect --- improved structure of eutectic alloy  
crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187
- Directionally solidified eutectic gamma plus beta  
nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279
- Directionally solidified eutectic gamma-gamma  
nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c 26 N78-18183
- Bonding of sapphire to sapphire by eutectic mixture of  
aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143

**EVACUATING (VACUUM)**

- Method for making a heat insulating and ablative  
structure  
[NASA-CASE-XMS-01108] c 15 N69-24322
- Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256
- Leak detector wherein a probe is monitored with  
ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896
- Evacuated, displacement compression mold --- of  
tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c 31 N75-13111

**EVAPORATION**

- Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483
- EVAPORATIVE COOLING**
- Tubular sublimatory evaporator heat sink  
[NASA-CASE-ARC-10912-1] c 34 N77-19353

**EVAPORATORS**

- Evaporant source for vapor deposition Patent  
[NASA-CASE-XMF-06065] c 15 N71-20395
- Deposition apparatus  
[NASA-CASE-LAR-10541-1] c 15 N72-32487
- Thermal control system --- removing waste heat from  
industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461
- Multi-leg heat pipe evaporator  
[NASA-CASE-MSC-20812-1] c 34 N86-27593

**EXAMINATION**

- Apparatus for use in examining the lattice of a  
semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950
- Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N85-20250

**EXCITATION**

- Magnetically switched power supply systems for lasers  
[NASA-CASE-NPO-16402-1] c 36 N85-29265

**EXCLUSION**

- Counter pumping debris excluder and separator --- gas  
turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090

**EXHAUST EMISSION**

- Apparatus and method for destructive removal of  
particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555

**EXHAUST GASES**

- Device for suppressing sound and heat produced by  
high-velocity exhaust jets Patent  
[NASA-CASE-XMF-01813] c 28 N70-41582
- Gas turbine exhaust nozzle --- for noise reduction  
[NASA-CASE-LEW-11569-1] c 07 N74-15453
- Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c 07 N74-33218
- Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c 34 N76-18364
- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089
- High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c 28 N79-28342
- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129

**EXHAUST NOZZLES**

- Annular rocket motor and nozzle configuration Patent  
[NASA-CASE-XLE-00078] c 28 N70-33284
- Nozzle Patent  
[NASA-CASE-XLA-00154] c 28 N70-33374
- Penshape exhaust nozzle for supersonic engine  
Patent  
[NASA-CASE-XLE-00057] c 28 N70-38711
- Ejection unit Patent  
[NASA-CASE-XNP-00676] c 15 N70-38996
- Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c 07 N78-27121
- Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097
- Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884
- Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873

**EXOTHERMIC REACTIONS**

- Ambient cure polyimide foams --- thermal resistant  
foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- Exothermic furnace module  
[NASA-CASE-MFS-25707-1] c 35 N82-26631
- Thermal control system --- removing waste heat from  
industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461

**EXPANDABLE STRUCTURES**

- Connector strips-positive, negative and T tabs  
[NASA-CASE-XGS-01395] c 03 N69-21539
- Reflector space satellite Patent  
[NASA-CASE-XLA-00138] c 31 N70-37981
- Foldable conduit Patent  
[NASA-CASE-XLE-00620] c 32 N70-41579
- Collapsible high gain antenna  
[NASA-CASE-KSC-10392] c 07 N73-26117
- Expandable space frames  
[NASA-CASE-ERC-10365-1] c 31 N73-32749
- Means for accommodating large overstrain in lead wires  
--- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c 33 N74-22865
- Antenna deployment mechanism for use with a  
spacecraft --- extensible and retractable telescopic  
antenna mast  
[NASA-CASE-GSC-12331-1] c 18 N80-14183
- Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N86-20803
- Deployable geodesic truss structure A01  
[NASA-CASE-LAR-13113-1] c 31 N86-24867
- Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789
- Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706

**EXPANSION**

- Apparatus for measuring swelling characteristics of  
membranes  
[NASA-CASE-XGS-03865] c 14 N69-21363
- Method for alleviating thermal stress damage in  
laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179

**EXPERIMENT DESIGN**

- Hydrofoil Patent  
[NASA-CASE-XLA-00229] c 12 N70-33305
- Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051
- Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193
- G conditioning suit Patent  
[NASA-CASE-XLA-02898] c 05 N71-20268
- Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161

**EXPIRED AIR**

- Metabolic rate meter and method  
[NASA-CASE-MSC-12239-1] c 52 N79-21750

**EXPLOSIONS**

- Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484

**EXPLOSIVE DEVICES**

- Tubular coupling having frangible connecting means  
[NASA-CASE-XLA-02854] c 15 N69-27490
- Hermetically sealed explosive release mechanism  
Patent  
[NASA-CASE-XGS-00824] c 15 N71-16078
- Nonmagnetic, explosive actuated indexing device  
Patent  
[NASA-CASE-XGS-02422] c 15 N71-21529
- Linear explosive comparison  
[NASA-CASE-LAR-10800-1] c 33 N72-27959
- Disconnect unit  
[NASA-CASE-NPO-11330] c 33 N73-26958
- Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c 20 N80-18097

**EXPLOSIVE FORMING**

- Electrical discharge apparatus for forming Patent  
[NASA-CASE-XMF-00375] c 15 N70-34249
- Tool and process for explosive joining of tubes  
[NASA-CASE-LAR-13309-1] c 37 N86-21858

**EXPLOSIVE WELDING**

- Totally confined explosive welding --- apparatus to  
reduce noise level and protect personnel during explosive  
bonding  
[NASA-CASE-LAR-10941-1] c 37 N74-21057
- Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c 37 N75-12326
- Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c 37 N79-13364
- Tool and process for explosive joining of tubes  
[NASA-CASE-LAR-13309-1] c 37 N86-21858

**EXPLOSIVES**

- Synthesis of superconducting compounds by explosive  
compaction of powders  
[NASA-CASE-MFS-20861-1] c 18 N73-32437
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425

Electroexplosive device  
[NASA-CASE-NPO-13858-1] c 28 N79-11231

**EXPONENTIAL FUNCTIONS**  
Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c 08 N72-20176

**EXPOSURE**  
Exposure interlock for oscilloscope cameras  
[NASA-CASE-LAR-10319-1] c 14 N73-32322  
Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c 35 N78-15461  
Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081

**EXPULSION**  
Electro-expulsive separation system  
[NASA-CASE-ARC-11813-1] c 33 N85-29150

**EXPULSION BLADDERS**  
Expulsion bladder-equipped storage tank structure  
Patent  
[NASA-CASE-XNP-00612] c 11 N70-38182

**EXTENSIONS**  
Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701

**EXTENSOMETERS**  
Extensometer frame  
[NASA-CASE-XLA-10322] c 15 N72-17452  
Conductive elastomeric extensometer  
[NASA-CASE-MFS-21049-1] c 52 N74-27864  
Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c 35 N77-22449  
Laser extensometer  
[NASA-CASE-MFS-19259-1] c 36 N78-14380  
Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375

**EXTERNAL COMBUSTION ENGINES**  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370

**EXTERNAL STORE SEPARATION**  
Remote pivot decoupler pylon: Wing/store suppression  
[NASA-CASE-LAR-13173-1] c 05 N85-19981  
Slide release mechanism --- for space shuttle orbiter/external tank connection device  
[NASA-CASE-MSC-20080-1] c 37 N85-30334

**EXTERNAL STORES**  
Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373

**EXTERNAL TANKS**  
Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784  
Slide release mechanism --- for space shuttle orbiter/external tank connection device  
[NASA-CASE-MSC-20080-1] c 37 N85-30334

**EXTRACTION**  
Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c 15 N70-40062  
Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c 37 N79-33467  
Supercritical solvent coil extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709

**EXTRAVEHICULAR ACTIVITY**  
Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203  
Hand-held self-manuevering unit Patent  
[NASA-CASE-XMS-05304] c 05 N71-12336  
Serpentuator Patent  
[NASA-CASE-XMF-05344] c 31 N71-16345  
Fastener apparatus Patent  
[NASA-CASE-ARC-10140-1] c 15 N71-17653  
Extravehicular tunnel suit system Patent  
[NASA-CASE-MSC-12243-1] c 05 N71-24728  
Life support system  
[NASA-CASE-MSC-12411-1] c 05 N72-20096  
Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012  
Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-2] c 54 N84-11758

**EXTREMELY LOW RADIO FREQUENCIES**  
VHF/UHF parasitic probe antenna Patent  
[NASA-CASE-XKS-09340] c 07 N71-24614

**EXTRUDING**  
Extrusion can  
[NASA-CASE-NPO-10812] c 15 N73-13464  
Brazing alloy binder  
[NASA-CASE-XMF-05868] c 26 N75-27125  
Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154

**EYE (ANATOMY)**  
Sight switch using an infrared source and sensor Patent  
[NASA-CASE-XMF-03934] c 09 N71-22985  
Ophthalmic method and apparatus  
[NASA-CASE-LEW-11669-1] c 05 N73-27062

Corneal seal device  
[NASA-CASE-LEW-12258-1] c 52 N77-28716  
Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c 52 N80-18690  
Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185  
Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1SB] c 52 N85-20639

**EYE DISEASES**  
Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1SB] c 52 N85-20639

**EYE EXAMINATIONS**  
Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c 05 N73-28072  
Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c 54 N75-27759  
Visual examination apparatus  
[US-PATENT-RE-28,921] c 52 N78-30783

**EYEPIECES**  
Wide angle long eye relief eyepiece Patent  
[NASA-CASE-XMS-06056-1] c 23 N71-24857

## F

**FABRICATION**  
Pressure variable capacitor  
[NASA-CASE-XNP-09752] c 14 N89-21541  
Method of making a regeneratively cooled combustion chamber Patent  
[NASA-CASE-XLE-00150] c 28 N70-41818  
Solar cell submodule Patent  
[NASA-CASE-XNP-05821] c 03 N71-11056  
Capacitor and method of making same Patent  
[NASA-CASE-LEW-10364-1] c 09 N71-13522  
Solar panel fabrication Patent  
[NASA-CASE-XNP-03413] c 03 N71-26726  
Method of forming a root cord restrained convolute section  
[NASA-CASE-MSC-12398] c 05 N72-20098  
Method of removing insulated material from insulated wires  
[NASA-CASE-FRC-10038] c 15 N72-20444  
Thin film temperature sensor and method of making same  
[NASA-CASE-NPO-11775] c 26 N72-28761  
Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c 44 N76-28635  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933  
Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c 27 N78-32262  
Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314  
Method for fabricating solar cells having integrated collector grits  
[NASA-CASE-LEW-12819-2] c 44 N79-18444  
Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431  
Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474  
Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c 44 N80-28835  
Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558  
Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519  
Photoelectric detection system --- manufacturing automation  
[NASA-CASE-MFS-23776-1] c 33 N82-28545  
Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780  
Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708  
Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709  
Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176  
Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350  
Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940  
Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734  
High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25436  
GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150

Method of fabricating an imaging X-ray spectrometer  
[NASA-CASE-GSC-12958-1] c 35 N86-20754

**FABRICS**  
Method of forming a root cord restrained convolute section  
[NASA-CASE-MSC-12398] c 05 N72-20098  
Amplifying ribbon extensometer  
[NASA-CASE-LAR-11825-1] c 35 N77-22449  
Nozzle extraction process and handmeter for measuring handle  
[NASA-CASE-LAR-12147-1] c 31 N79-11246  
Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296  
Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MSC-18382-1] c 27 N82-16238  
Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339  
Absorbent product to absorb fluids --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c 24 N82-29362  
High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MSC-18832-1] c 27 N83-18908  
Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125

**FABRY-PEROT INTERFEROMETERS**  
Retrodirective optical system  
[NASA-CASE-XGS-04480] c 16 N89-27491

**FACSIMILE COMMUNICATION**  
Facsimile video remodulation network  
[NASA-CASE-GSC-10185-1] c 07 N72-12081  
Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613

**FACTORIAL DESIGN**  
Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194  
Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195

**FAIL-SAFE SYSTEMS**  
Fail-safe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c 09 N72-25262  
Latch mechanism  
[NASA-CASE-MSC-12549-1] c 37 N74-27803  
Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c 44 N79-14527  
Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254  
Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115  
Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c 60 N82-29013

**FAILURE ANALYSIS**  
Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c 39 N79-22537  
Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333

**FAILURE MODES**  
High speed rolling element bearing  
[NASA-CASE-LEW-10856-1] c 15 N72-22490  
Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090

**FAIRINGS**  
Method and system for ejecting fairing sections from a rocket vehicle  
[NASA-CASE-GSC-10590-1] c 31 N73-14853  
Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288

**FALLING SPHERES**  
Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587

**FAR INFRARED RADIATION**  
Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c 14 N73-30389  
Method and means for generation of tunable laser sidebands in the far-infrared region  
[NASA-CASE-NPO-16497-1-CU] c 36 N86-20779

**FAR ULTRAVIOLET RADIATION**  
Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641

**FARADAY EFFECT**  
Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381



## FAST FOURIER TRANSFORMATIONS

- Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651
- FASTENERS**
- Force measuring instrument Patent  
[NASA-CASE-XMF-00456] c 14 N70-34705
- Life preserver Patent  
[NASA-CASE-XMS-00864] c 05 N70-36493
- All-directional fastener Patent  
[NASA-CASE-XLA-01807] c 15 N71-10799
- Fastener apparatus Patent  
[NASA-CASE-ARC-10140-1] c 15 N71-17653
- Methods and apparatus employing vibratory energy for wrenching Patent  
[NASA-CASE-MFS-20586] c 15 N71-17686
- Coaxial cable connector Patent  
[NASA-CASE-XNP-04732] c 09 N71-20851
- Latching mechanism Patent  
[NASA-CASE-XMS-03745] c 15 N71-21076
- Central spar and module joint Patent  
[NASA-CASE-XNP-02341] c 15 N71-21531
- Threadless fastener apparatus Patent  
[NASA-CASE-XFR-05302] c 15 N71-23254
- Flexibly connected support and skin Patent  
[NASA-CASE-XLA-01027] c 31 N71-24035
- Quick release hook tape Patent  
[NASA-CASE-XMS-10860-1] c 15 N71-25975
- Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c 54 N78-17678
- Chassis unit insert tightening-extract device  
[NASA-CASE-XMS-01077-1] c 37 N79-33467
- One-step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c 33 N82-26571
- Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673
- Daze fasteners  
[NASA-CASE-LAR-13009-1] c 37 N85-29285
- Mechanical fastener  
[NASA-CASE-LAR-12738-2] c 37 N85-30335
- Thermal-stress-free fasteners  
[NASA-CASE-LAR-13325-1-SB] c 37 N86-20805
- FATIGUE (MATERIALS)**
- Strain coupled servo control system Patent  
[NASA-CASE-XLA-08530] c 32 N71-25360
- TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c 39 N78-16387
- FATIGUE LIFE**
- Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505
- Method of improving the reliability of a rolling element system Patent  
[NASA-CASE-XLE-02999] c 15 N71-18052
- High speed rolling element bearing  
[NASA-CASE-LEW-10856-1] c 15 N72-22490
- High speed hybrid bearing comprising a fluid bearing and a rolling bearing connected in series  
[NASA-CASE-LEW-11152-1] c 15 N73-32359
- Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c 39 N78-10493
- FATIGUE TESTING MACHINES**
- Horizontal cryostat for fatigue testing Patent  
[NASA-CASE-XMF-10968] c 14 N71-24234
- Light shield and infrared reflector for fatigue testing Patent  
[NASA-CASE-XLA-01782] c 14 N71-26136
- Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N86-32770
- FATIGUE TESTS**
- Fatigue testing device Patent  
[NASA-CASE-XLA-02131] c 32 N70-42003
- Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c 39 N79-22537
- Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221
- FATS**
- Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c 27 N77-31308
- FECEs**
- Relief container  
[NASA-CASE-XMS-06761] c 05 N69-23192
- FEED SYSTEMS**
- Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c 25 N71-21694
- Propellant tank pressurization system Patent  
[NASA-CASE-XNP-00650] c 27 N71-28929
- Liquid waste feed system  
[NASA-CASE-LAR-10365-1] c 05 N72-27102
- Pressurized lighting system  
[NASA-CASE-KSC-10644] c 09 N72-27227
- Dual frequency microwave reflex feed  
[NASA-CASE-NPO-13091-1] c 09 N73-12214

- Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c 15 N73-27406
- Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c 20 N80-14188
- Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c 31 N80-18231
- Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154
- Constant-output atomizer --- Inhalation therapy and aerosol research  
[NASA-CASE-MFS-25631-1] c 34 N84-12406
- FEEDBACK**
- Active RC networks  
[NASA-CASE-ARC-10020] c 10 N72-17172
- Feedback shift register with states decomposed into cycles of equal length  
[NASA-CASE-NPO-11082] c 08 N72-22167
- Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c 09 N72-25254
- FEEDBACK AMPLIFIERS**
- Radiometric temperature reference Patent  
[NASA-CASE-MSC-13276-1] c 14 N71-27058
- Compensating bandwidth switching transients in an amplifier circuit Patent  
[NASA-CASE-XNP-01107] c 10 N71-28859
- Monostable multivibrator with complementary NOR gates Patent  
[NASA-CASE-MSC-13492-1] c 10 N71-28860
- FEEDBACK CIRCUITS**
- Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317
- Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c 08 N71-12503
- Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c 10 N71-19418
- Feedback integrator with grounded capacitor Patent  
[NASA-CASE-XAC-10607] c 10 N71-23669
- Parametric amplifiers with idler circuit feedback  
[NASA-CASE-LAR-10253-1] c 09 N72-25258
- Pseudonoise sequence generators with three tap linear feedback shift registers  
[NASA-CASE-NPO-11406] c 08 N73-12175
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339
- Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c 33 N83-36356
- FEEDBACK CONTROL**
- Nonlinear analog-to-digital converter Patent  
[NASA-CASE-XAC-04031] c 08 N71-18594
- Pulse-type magnetic core memory element circuit with blocking oscillator feedback Patent  
[NASA-CASE-XGS-03303] c 08 N71-18595
- BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890
- A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886
- Sampled data controller Patent  
[NASA-CASE-GSC-10554-1] c 08 N71-29033
- A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c 07 N71-33613
- Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004
- Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c 33 N74-11049
- Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428
- The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c 33 N77-10428
- System and method for tracking a signal source --- employing feedback control  
[NASA-CASE-HQN-10880-1] c 17 N78-17140
- Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c 31 N78-17237
- Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c 33 N78-32340
- Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583
- Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078
- Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421
- Three phase power factor controller  
[NASA-CASE-MFS-25535-2] c 33 N84-22885
- Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661
- Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142

- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-15558-1-CU] c 74 N86-20129
- FEEDBACK FREQUENCY MODULATION**
- Means for communicating through a layer of ionized gases Patent  
[NASA-CASE-XLA-01127] c 07 N70-41372
- Data-aided carrier tracking loops  
[NASA-CASE-NPO-11282] c 10 N73-16205
- Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c 33 N77-14334
- FEEDERS**
- Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c 51 N74-15778
- FEET (ANATOMY)**
- Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112
- FELTS**
- Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c 27 N79-12221
- FEALES**
- Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736
- Urine collection device  
[NASA-CASE-MSC-16433-1] c 52 N78-27750
- Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c 52 N81-28740
- FERMENTATION**
- Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227
- FERRITES**
- Magnetic recording head and method of making same Patent  
[NASA-CASE-GSC-10097-1] c 08 N71-27210
- Method for making conductors for ferrite memory arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-10994-1] c 24 N75-13032
- Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c 26 N76-18257
- FERROFLUIDS**
- Linear motion valve  
[NASA-CASE-MSC-20148-1] c 37 N85-29284
- FERROMAGNETIC MATERIALS**
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c 34 N78-17335
- FERROMAGNETIC RESONANCE**
- Ferroresonant regulated power supply  
[NASA-CASE-NPO-15977-1-CU] c 33 N86-20673
- FERROMAGNETISM**
- High temperature ferromagnetic cobalt-base alloy Patent  
[NASA-CASE-XLE-03629] c 17 N71-23248
- FIBER COMPOSITES**
- Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c 24 N79-24062
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745
- Method and apparatus for gripping uniaxial fibrous composite materials  
[NASA-CASE-LEW-13758-1] c 24 N84-27829
- Light weight fire resistant graphite composites  
[NASA-CASE-ARC-11615-1-SB] c 24 N85-28976
- Arc spray fabrication of metal matrix composite monolayer  
[NASA-CASE-LEW-13828-1] c 24 N85-30027
- Light weight fire resistant graphite composites  
[NASA-CASE-ARC-11615-1SB] c 24 N86-28131
- FIBER OPTICS**
- Fiber optic vibration transducer and analyzer Patent  
[NASA-CASE-XMF-02433] c 14 N71-10616
- Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N76-24553
- Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c 74 N78-14889
- Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c 74 N79-20857
- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186
- Apparatus for fiber optic liquid level sensing  
[NASA-CASE-MSC-18674-1] c 74 N81-24907
- Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342
- Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448

- Fiber optic transmission line stabilization apparatus and method  
[NASA-CASE-NPO-15036-1] c 74 N82-19029
- Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c 74 N82-30071
- Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659
- Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c 74 N83-29032
- Optical fiber tactile sensor  
[NASA-CASE-NPO-15375-1] c 74 N84-11921
- Laser pulse detection method and apparatus  
[NASA-CASE-NPO-18030-1] c 36 N84-25037
- Optical fiber coupling method and apparatus  
[NASA-CASE-NPO-15464-1] c 74 N85-29749
- Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N86-20129
- FIBER REINFORCED COMPOSITES**
- Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296
- Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392
- Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950
- Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451
- FIBER RELEASE**
- Curing agent for polyepoxides and epoxy resins and composites cured therewith — preventing carbon fiber release  
[NASA-CASE-LEW-13226-1] c 27 N81-17260
- Method and device for detection of a substance — determining carbon fiber release in fire situations  
[NASA-CASE-NPO-14940-1] c 33 N83-31954
- FIBER STRENGTH**
- High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25438
- FIBERS**
- Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088
- Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c 37 N76-18456
- Composite lamination method  
[NASA-CASE-LAR-12019-1] c 24 N78-17150
- Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c 44 N79-10513
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244
- A method and technique for installing light-weight fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-18934-3] c 24 N82-26387
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745
- FIELD EFFECT TRANSISTORS**
- Frequency to analog converter Patent  
[NASA-CASE-XNP-07040] c 08 N71-12500
- Voltage to frequency converter Patent  
[NASA-CASE-GSC-10022-1] c 10 N71-25882
- Broadband video process with very high input impedance  
[NASA-CASE-NPO-10199] c 09 N72-17156
- Data multiplexer using tree switching configuration  
[NASA-CASE-NPO-11333] c 08 N72-22162
- Integrated circuit including field effect transistor and cermet resistor  
[NASA-CASE-GSC-10835-1] c 09 N72-33205
- Radiation hardening of MOS devices by boron — for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c 76 N74-20329
- Stored charge transistor  
[NASA-CASE-NPO-11156-2] c 33 N75-31331
- Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-23312-1] c 33 N78-27326
- Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c 33 N81-26360
- CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N81-27396
- Electronic system for high power load control — solar arrays  
[NASA-CASE-NPO-15358-1] c 33 N83-27126
- FET charge sensor and voltage probe  
[NASA-CASE-NPO-16045-1] c 76 N84-33211
- JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515
- Hybrid power semiconductor  
[NASA-CASE-LEW-13922-1] c 33 N86-20672
- FIELD EMISSION**
- Method and apparatus for limiting field emission current  
[NASA-CASE-ERC-10015-2] c 10 N72-27248
- Apparatus for mounting a field emission cathode  
[NASA-CASE-LEW-14108-1] c 33 N85-29149
- FIELD OF VIEW**
- Scanner — photography from a spin stabilized synchronous satellite  
[NASA-CASE-GSC-12032-2] c 43 N82-13465
- Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139
- FILAMENT WINDING**
- Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c 15 N71-10809
- Method of making a filament-wound container Patent  
[NASA-CASE-XLE-03803-2] c 15 N71-17651
- Method of fabricating a twisted composite superconductor  
[NASA-CASE-LEW-11015] c 26 N73-32571
- Method of making reinforced composite structure  
[NASA-CASE-LEW-12819-1] c 24 N77-19171
- FILAMENTS**
- Radiant heater having formed filaments Patent  
[NASA-CASE-XLE-00387] c 33 N70-34812
- Twisted multifilament superconductor  
[NASA-CASE-LEW-11726-1] c 26 N73-28752
- FILLERS**
- Method for making a heat insulating and ablative structure  
[NASA-CASE-XMS-01108] c 15 N69-24322
- Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c 24 N78-27180
- Polymeric compositions and their method of manufacture — forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c 27 N81-24258
- Polyvinyl alcohol battery separator containing inert filler — alkaline batteries  
[NASA-CASE-LEW-13556-1] c 44 N81-27615
- Adjustable high emittance gap filler — reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339
- FILM COOLING**
- Multilist film cooled pyrolytic graphite rocket nozzle Patent  
[NASA-CASE-XNP-04389] c 28 N71-20942
- Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144
- Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177
- Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433
- FILM THICKNESS**
- Chemical vapor deposition reactor — providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c 25 N79-28253
- Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949
- Degasifying and mixing apparatus for liquids — potable water for spacecraft  
[NASA-CASE-MSC-18936-1] c 35 N83-29652
- Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112
- FILMS**
- Apparatus for obtaining isotropic irradiation of a specimen  
[NASA-CASE-MFS-20095] c 24 N72-11595
- Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994
- FILTERS**
- Filter system for control of outgas contamination in vacuum Patent  
[NASA-CASE-MFS-14711] c 15 N71-26185
- Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773
- Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c 34 N74-30608
- FILTRATION**
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119
- Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104
- FINS**
- Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629
- Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421
- FIRE EXTINGUISHERS**
- Fire extinguishing apparatus having a slidable mass for a penetrator nozzle — for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137
- Synthesis of dawsonites — for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977
- Fire extinguishant materials  
[NASA-CASE-ARC-11252-1] c 25 N83-36118
- FIRE PREVENTION**
- Hydrogen fire blink detector  
[NASA-CASE-MFS-15083] c 14 N72-25412
- Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11800-1] c 35 N74-21019
- Fire resistant polymers based on 1-(diorgano oxyphosphoryl)methyl-2,4- and 2,6-diamino benzenes  
[NASA-CASE-ARC-11512-2] c 27 N85-21362
- Fire resistant polyamide based on 1-(diorganoxyphosphoryl)methyl-2,4- and -2,6-diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568
- FIREPROOFING**
- Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014
- Flexible fire retardant foam  
[NASA-CASE-ARC-10180-1] c 28 N72-20767
- Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562
- Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572
- Flexible fire retardant polyisocyanate modified neoprene foam — for thermal protective devices  
[NASA-CASE-ARC-10180-1] c 27 N74-12814
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405
- Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213
- Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100
- FIRES**
- Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375
- Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum  
[NASA-CASE-MFS-13130] c 10 N72-17173
- FIRING (IGNITING)**
- Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922
- FITTINGS**
- Quick release connector Patent  
[NASA-CASE-XLA-01141] c 15 N71-13789
- Flared tube strainer  
[NASA-CASE-XLA-05056] c 15 N72-11389
- Self-indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N84-20860
- Apparatus for adapting an end effector device remotely controlled manipulator arm  
[NASA-CASE-MFS-25949-1] c 37 N86-19603
- FIXED WINGS**
- Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243
- FIXTURES**
- Tool for use in lifting pin supported objects  
[NASA-CASE-NPO-13157-1] c 37 N74-32918
- Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c 37 N76-21554
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492
- Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081
- FLAME PROBES**
- Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410
- FLAME RETARDANTS**
- Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213
- Process for spinning flame retardant elastomeric compositions — fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MSC-14331-3] c 27 N78-32262



Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116

Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158

Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c 27 N80-24438

Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999

Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MSC-18382-1] c 27 N82-16238

Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900

The 1-(dialkoxyposphonyl)methyl-2,4- and -2,6-dinitro- and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-1] c 23 N83-28076

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854

Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324

Vinyl styrylpyridines and their copolymerization with bismaleimide resins  
[NASA-CASE-ARC-11429-1-CU] c 27 N84-16341

Fire resistant polymers based on 1-(dialkoxyposphonyl)methyl-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11512-1] c 27 N84-20702

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745

Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394

The 1-(diorganoxophosphonyl)methyl-2, 4- and -2, 6-dinitro and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N86-20499

Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797

Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525

**FLAME SPRAYING**

Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077

Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739

Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c 37 N74-11301

Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233

**FLAME TEMPERATURE**

Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c 34 N78-27357

**FLAMES**

Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c 33 N71-29151

Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c 35 N76-18403

**FLAMMABILITY**

Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c 11 N71-24985

Burn rate testing apparatus  
[NASA-CASE-XMS-09690] c 33 N72-25913

Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c 27 N80-10358

Violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c 27 N80-26446

Fire resistant polymers based on 1-(dialkoxyposphonyl)methyl-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11512-1] c 27 N84-20702

Light weight fire resistant graphite composites  
[NASA-CASE-ARC-11615-1-SB] c 24 N85-28976

Light weight fire resistant graphite composites  
[NASA-CASE-ARC-11615-1-SB] c 24 N86-28131

**FLANGES**

Cassegrain antenna subreflector flange for suppressing ground noise Patent  
[NASA-CASE-XNP-00683] c 09 N70-35425

Anti-glare improvement for optical imaging systems Patent  
[NASA-CASE-NPO-10337] c 14 N71-15604

Flanged major modular assembly jig  
[NASA-CASE-MSC-19372-1] c 39 N76-31562

**FLAPS (CONTROL SURFACES)**

Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332

Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410

Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110

Reversed cowl flap inlet thrust augmentor --- with adjustable airfoil  
[NASA-CASE-ARC-10754-1] c 07 N75-24736

**FLARED BODIES**

Flared tube strainer  
[NASA-CASE-XLA-05056] c 15 N72-11389

**FLASH LAMPS**

Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189

**FLAT CONDUCTORS**

Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986

Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c 09 N71-28691

Shielded flat cable  
[NASA-CASE-MFS-13687-2] c 09 N72-22198

Electrical connector  
[NASA-CASE-MFS-20757] c 09 N72-28225

Method and apparatus for preparing multiconductor cable with flat conductors  
[NASA-CASE-MFS-10946-1] c 31 N79-21226

Edge coating of flat wires  
[NASA-CASE-XMF-05757-1] c 31 N79-21227

**FLAT PLATES**

Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988

Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c 15 N72-20446

Heat transfer device  
[NASA-CASE-MFS-22938-1] c 34 N76-18374

Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c 34 N77-32413

Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640

Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928

**FLEXIBILITY**

Weatherproof helix antenna Patent  
[NASA-CASE-XKS-08485] c 07 N71-19493

Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937

Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c 54 N74-32546

Nozzle extraction process and handmeter for measuring handle  
[NASA-CASE-LAR-12147-1] c 31 N79-11246

Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c 44 N79-14527

Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N86-20803

Flexible diaphragm: Extreme temperature usage  
[NASA-CASE-MSC-20797-1] c 37 N86-20806

**FLEXIBLE BODIES**

Flexible back-up bar Patent  
[NASA-CASE-XMF-00722] c 15 N70-40204

Deflective rod switch with elastic support and sealing means Patent  
[NASA-CASE-XNP-09808] c 09 N71-12518

Flexible composite membrane Patent  
[NASA-CASE-XNP-08837] c 18 N71-16210

Self supporting space vehicle Patent  
[NASA-CASE-XLA-00117] c 31 N71-17680

Extravehicular tunnel suit system Patent  
[NASA-CASE-MSC-12243-1] c 05 N71-24728

Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c 15 N71-27169

Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747

Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877

Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421

Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686

Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c 27 N80-16163

**FLEXIBLE WINGS**

Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981

Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c 02 N70-41863

Control for flexible parawing Patent  
[NASA-CASE-XLA-06958] c 02 N71-11038

**FLEXING**

Two degree inverted flexure  
[NASA-CASE-ARC-10345-1] c 15 N73-12488

Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987

Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492

**FLIGHT**

Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692

**FLIGHT ALTITUDE**

Altitude measuring system  
[NASA-CASE-ERC-10412-1] c 09 N73-12211

Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-FRC-10049-1] c 04 N74-13420

Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296

System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075

CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040

Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304

System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443

**FLIGHT CLOTHING**

Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-2] c 54 N84-11758

**FLIGHT CONTROL**

Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157

Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073

Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
[NASA-CASE-XAC-00048] c 02 N71-29128

Numerical computer peripheral interactive device with manual controls  
[NASA-CASE-NPO-11497] c 08 N73-25206

Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c 08 N74-10942

G-load measuring and indicator apparatus --- for aircraft  
[NASA-CASE-ARC-10806] c 06 N74-27872

Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930

Deploy/release system --- model aircraft flight control  
[NASA-CASE-LAR-11575-1] c 02 N76-16014

Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493

Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882

Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N84-20522

**FLIGHT CREWS**

Survival couch Patent  
[NASA-CASE-XLA-00118] c 05 N70-33285

**FLIGHT INSTRUMENTS**

Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N84-20522

Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733

**FLIGHT RECORDERS**

Event recorder Patent  
[NASA-CASE-XLA-01832] c 14 N71-21006

**FLIGHT SAFETY**

Aerial capsule emergency separation device Patent  
[NASA-CASE-XLA-00115] c 03 N70-33343

Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641

**FLIGHT SIMULATION**

Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966

Television simulation for aircraft and space flight Patent  
[NASA-CASE-XFR-03107] c 09 N71-19449

Separation simulator Patent  
[NASA-CASE-XKS-04631] c 10 N71-23663

**FLIGHT SIMULATORS**

Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815

Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394

Wind tunnel test section  
[NASA-CASE-MFS-20509] c 11 N72-17183

Numerical computer peripheral interactive device with manual controls  
[NASA-CASE-NPO-11497] c 08 N73-25206

Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot  
[NASA-CASE-LAR-10550-1] c 09 N74-30597

Vehicle simulator binocular multiplanar visual display system  
[NASA-CASE-ARC-10808-1] c 09 N76-24280

Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083

Chromatically corrected virtual image display --- lens design for flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N79-14892

Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
[NASA-CASE-LAR-12149-2] c 09 N79-31228

Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185

Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806

Biocentrifuge system capable of exchanging specimen cages while in operational mode  
[NASA-CASE-MFS-23825-1] c 51 N81-32829

Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212

Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304

Simulator scene display evaluation  
[NASA-CASE-ARC-11504-1] c 09 N84-16221

Inflight IFR procedures simulator  
[NASA-CASE-KSC-11218-1] c 09 N85-19990

Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447

**FLIGHT TESTS**

Air frame drag balance Patent  
[NASA-CASE-XLA-00113] c 14 N70-33386

**FLIGHT TRAINING**

Inflight IFR procedures simulator  
[NASA-CASE-KSC-11218-1] c 09 N85-19990

**FLIGHT VEHICLES**

Leading edge curvature based on convective heating Patent  
[NASA-CASE-XLA-01486] c 01 N71-23497

Altitude sensing device  
[NASA-CASE-XMS-01994-1] c 14 N72-17326

**FLIP-FLOPS**

AC logic flip-flop circuits Patent  
[NASA-CASE-XGS-00823] c 10 N71-15910

Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772

Flipflop interrogator and bi-polar current driver Patent  
[NASA-CASE-XGS-03058] c 10 N71-19547

**FLOAT ZONES**

Floating emitter solar cell junction transistor  
[NASA-CASE-NPO-16467-1-CU] c 33 N86-24908

**FLOATING**

Floating baffle to improve efficiency of liquid transfer from tanks  
[NASA-CASE-KSC-10639] c 15 N73-26472

Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c 54 N74-14845

Floating nut retention system  
[NASA-CASE-MSC-16938-1] c 37 N80-23653

**FLOATS**

Magnetically centered liquid column float Patent  
[NASA-CASE-XAC-00030] c 14 N70-34820

**FLOORS**

Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N83-28281

**FLOTATION**

Rescue litter flotation assembly Patent  
[NASA-CASE-XMS-04170] c 05 N71-22748

**FLOW CHAMBERS**

Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c 34 N78-17337

Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182

Fluidic angular velocity sensor  
[NASA-CASE-NPO-16479-1-CU] c 35 N85-29219

**FLOW CHARACTERISTICS**

Copolyimides with a combination of flexibilizing groups  
[NASA-CASE-LAR-13354-1] c 27 N86-20586

**FLOW DIRECTION INDICATORS**

Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271

Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c 14 N71-24864

Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295

**FLOW DISTRIBUTION**

Full flow with shut off and selective drainage control valve Patent application  
[NASA-CASE-ERC-10208] c 15 N70-10867

Method of obtaining permanent record of surface flow phenomena Patent  
[NASA-CASE-XLA-01353] c 14 N70-41366

Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815

Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10837-1] c 35 N75-16783

Controlled separation combustor --- airflow distribution in gas turbine engines  
[NASA-CASE-LEW-11583-1] c 20 N76-14190

Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187

Fluidic momentum controller  
[NASA-CASE-MSC-20906-1] c 18 N86-19344

Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680

Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N86-21859

**FLOW MEASUREMENT**

Flow test device  
[NASA-CASE-XMS-04917] c 14 N69-24257

Nuclear mass flowmeter  
[NASA-CASE-MFS-20485] c 14 N72-11365

Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415

Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503

Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c 35 N77-24454

Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359

Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402

Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504

Bio-medical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c 52 N83-27577

Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N84-25015

Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295

Vibration-free Raman Doppler velocimeter  
[NASA-CASE-LAR-13268-1] c 35 N85-29216

Auto covariance computer  
[NASA-CASE-LAR-12988-1] c 60 N86-21154

Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N86-24978

Fluid flow meter for measuring the rate of fluid flow in a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752

Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-NPO-11510-1] c 35 N86-32697

**FLOW REGULATORS**

Anti-backlash circuit for hydraulic drive system Patent  
[NASA-CASE-XNP-01020] c 03 N71-12260

Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c 15 N71-15608

Fluid flow control valve Patent  
[NASA-CASE-XLE-00703] c 15 N71-15067

Gas regulator Patent  
[NASA-CASE-NPO-10298] c 12 N71-17661

Semitoroidal diaphragm cavitating valve Patent  
[NASA-CASE-XNP-09704] c 12 N71-18615

Temperature sensitive flow regulator Patent  
[NASA-CASE-MFS-14259] c 15 N71-18213

Pneumatic amplifier Patent  
[NASA-CASE-MSC-12121-1] c 15 N71-27147

Gas flow control device  
[NASA-CASE-NPO-11479] c 15 N73-13462

Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c 37 N77-28487

Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c 37 N78-24545

Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468

Automatic thermal switch  
[NASA-CASE-GSC-12415-1] c 33 N82-24419

Bio-medical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c 52 N83-27577

Combined riblet and LEBU drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N85-28922

Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253

Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N86-21859

**FLOW RESISTANCE**

Flow resistivity instrument  
[NASA-CASE-LAR-13053-1] c 43 N83-29783

**FLOW STABILITY**

Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983

Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730

Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504

**FLOW VELOCITY**

Method for continuous variation of propellant flow and thrust in propulsive devices Patent  
[NASA-CASE-XLE-00177] c 28 N70-40387

Densitometer Patent  
[NASA-CASE-XLE-00688] c 14 N70-41330

Device for suppressing sound and heat produced by high-velocity exhaust jets Patent  
[NASA-CASE-XMF-01813] c 28 N70-41582

Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c 14 N70-41994

Zeta potential flowmeter Patent  
[NASA-CASE-XNP-08509] c 14 N71-23226

Method for measuring the characteristics of a gas Patent  
[NASA-CASE-XLA-03375] c 16 N71-24074

Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828

Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546

Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432

Flow rate switch  
[NASA-CASE-NPO-10722] c 09 N72-20199

Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415

Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730

Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c 09 N75-12969

Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10842-1] c 36 N76-14447

System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c 34 N77-27345

Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359

Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088

Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195

**FLOW VISUALIZATION**

Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896

Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815

Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178

**FLOWMETERS**

Flow test device  
[NASA-CASE-XMS-04917] c 14 N69-24257

Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c 14 N70-41994

Heated element fluid flow sensor Patent  
[NASA-CASE-MSC-12084-1] c 12 N71-17569

Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-18212

Zeta potential flowmeter Patent  
[NASA-CASE-XNP-08509] c 14 N71-23226

Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692

Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828

Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546

Nuclear mass flowmeter  
[NASA-CASE-MFS-20485] c 14 N72-11365

Respiratory analysis system and method  
[NASA-CASE-MSC-13436-1] c 05 N73-32015

Low power electromagnetic flowmeter providing accurate zero set  
[NASA-CASE-ARC-10362-1] c 14 N73-32326

Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c 35 N74-21018

Leak detector  
[NASA-CASE-MFS-21761-1] c 35 N75-15931

System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c 34 N77-27345

Automatic flowmeter calibration system  
[NASA-CASE-KSC-11076-1] c 34 N81-26402

Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295

State-of-charge coulometer  
[NASA-CASE-NPO-15759-1] c 35 N85-21596

- Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547
- Fluid flow meter for measuring the rate of fluid flow in a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752
- FLUID AMPLIFIERS**
- Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466
- Multistage vortex valve system Patent  
[NASA-CASE-XMF-04709] c 15 N71-15609
- Shear modulated fluid amplifier Patent  
[NASA-CASE-MFS-10412] c 12 N71-17578
- Rocket thrust throttling system  
[NASA-CASE-LEW-10374-1] c 28 N73-13773
- Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c 33 N74-11050
- Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMF-05964-1] c 20 N79-21124
- FLUID DYNAMICS**
- Degassing and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MSC-18936-1] c 35 N83-29652
- FLUID FILLED SHELLS**
- Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion  
[NASA-CASE-NPO-14596-3] c 31 N83-31896
- FLUID FILMS**
- Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c 37 N74-21061
- Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c 37 N76-15461
- Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c 37 N76-22541
- FLUID FILTERS**
- Liquid-gas separator for zero gravity environment Patent  
[NASA-CASE-XMS-01492] c 05 N70-41297
- High pressure filter Patent  
[NASA-CASE-XNP-00732] c 28 N70-41447
- Water separating system Patent  
[NASA-CASE-XMS-13052] c 14 N71-20427
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282
- Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MSC-14273-1] c 34 N75-33342
- Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c 37 N76-14463
- Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c 34 N79-24285
- Air removal device --- life support systems  
[NASA-CASE-XLA-8914-2] c 25 N82-21269
- Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569
- FLUID FLOW**
- Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466
- Pneumatic system for controlling and actuating pneumatic cyclic devices  
[NASA-CASE-XMS-04843] c 03 N69-21469
- Full flow with shut off and selective drainage control valve Patent application  
[NASA-CASE-ERC-10208] c 15 N70-10867
- Conical valve plug Patent  
[NASA-CASE-XLE-00715] c 15 N70-34859
- Pressure regulating system Patent  
[NASA-CASE-XNP-00450] c 15 N70-38603
- Antiflutter ball check valve Patent  
[NASA-CASE-XNP-01152] c 15 N70-41811
- Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c 14 N71-10500
- Multistage vortex valve system Patent  
[NASA-CASE-XMF-04709] c 15 N71-15609
- Heated element fluid flow sensor Patent  
[NASA-CASE-MSC-12084-1] c 12 N71-17569
- Multiple orifice throttle valve Patent  
[NASA-CASE-XNP-09698] c 15 N71-18580
- Fluid flow meter with comparator reference means Patent  
[NASA-CASE-XGS-01331] c 14 N71-22996
- Pressure transducer calibrator Patent  
[NASA-CASE-XNP-01660] c 14 N71-23036
- Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191
- Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546
- Electrohydrodynamic control valve Patent  
[NASA-CASE-NPO-10416] c 12 N71-27332
- Fluid jet amplifier Patent  
[NASA-CASE-XLE-09341] c 12 N71-28741

- Nuclear mass flowmeter  
[NASA-CASE-MFS-20485] c 14 N72-11365
- Flow rate switch  
[NASA-CASE-NPO-10722] c 09 N72-20199
- Torsional disconnect unit  
[NASA-CASE-NPO-10704] c 15 N72-20445
- Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c 14 N72-22442
- Cryogenic feedthrough  
[NASA-CASE-LAR-10031] c 15 N72-22484
- Geysering inhibitor for vertical cryogenic transfer pipe  
[NASA-CASE-KSC-10615] c 15 N73-12486
- Pump for delivering heated fluids  
[NASA-CASE-NPO-11417] c 15 N73-24513
- Flow control valve --- for high temperature fluids  
[NASA-CASE-NPO-11951-1] c 37 N74-21065
- Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730
- Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686
- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503
- Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MSC-14273-1] c 34 N75-33342
- Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c 36 N76-14447
- Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c 37 N76-14460
- Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c 34 N77-24423
- Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c 36 N77-25501
- Accumulator  
[NASA-CASE-MFS-19287-1] c 34 N77-30399
- Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c 35 N78-19465
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c 34 N78-25351
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c 37 N78-25426
- Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c 37 N79-11402
- Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470
- Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680
- A two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N85-21610
- Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195
- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N86-19611
- Fluid leak indicator  
[NASA-CASE-MSC-20783-1] c 35 N86-20756
- Advanced vapor supply manifold  
[NASA-CASE-LAR-13259-1] c 37 N86-20800
- Fluid flow meter for measuring the rate of fluid flow in a conduit  
[NASA-CASE-MFS-28030-1] c 35 N86-25752
- Two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N86-32696
- FLUID INJECTION**
- Apparatus for igniting solid propellants Patent  
[NASA-CASE-XLE-00207] c 28 N70-33375
- Method of igniting solid propellants Patent  
[NASA-CASE-XLE-01988] c 27 N71-15634
- Aerodynamic spike nozzle Patent  
[NASA-CASE-XGS-01143] c 31 N71-15647
- Process of forming particles in a cryogenic path Patent  
[NASA-CASE-NPO-10250] c 23 N71-16212
- Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089
- Tertiary flow injection thrust vectoring system Patent  
[NASA-CASE-MFS-20831] c 28 N71-29153
- Programmable physiological infusion  
[NASA-CASE-ARC-10447-1] c 52 N74-22771
- FLUID JETS**
- Propeller blade loading control Patent  
[NASA-CASE-XAC-00139] c 02 N70-34856
- FLUID LOGIC**
- Logic AND gate for fluid circuits Patent  
[NASA-CASE-XLA-07391] c 12 N71-17579

## FLUID MECHANICS

- Leak detector Patent  
[NASA-CASE-LAR-10323-1] c 12 N71-17573
- Parallel-plate viscometer with double diaphragm suspension  
[NASA-CASE-NPO-11387] c 14 N73-14429
- Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c 37 N82-12442
- FLUID POWER**
- Fluid power transmission Patent  
[NASA-CASE-XMS-01445] c 12 N71-16031
- Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c 15 N71-28465
- FLUID PRESSURE**
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c 34 N78-25351
- Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442
- Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583
- Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788
- FLUID ROTOR GYROSCOPES**
- Piezoelectric pump Patent  
[NASA-CASE-XNP-05429] c 26 N71-21824
- FLUID SWITCHING ELEMENTS**
- Booster tank system Patent  
[NASA-CASE-MSC-12390] c 27 N71-29155
- FLUID TRANSMISSION LINES**
- Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225
- FLUIDIC CIRCUITS**
- Technique of duplicating fragile core  
[NASA-CASE-XLA-07829] c 15 N72-16329
- Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503
- FLUIDICS**
- Fluidic-thermochromic display device Patent  
[NASA-CASE-ERC-10031] c 12 N71-18603
- Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c 09 N71-33519
- Fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c 28 N72-22769
- Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c 33 N74-11050
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c 37 N78-25426
- Fluidic angular velocity sensor  
[NASA-CASE-NPO-16479-1] c 35 N86-32695
- FLUIDIZED BED PROCESSORS**
- Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154
- Fluidized bed coal combustion reactor  
[NASA-CASE-NPO-14273-1] c 25 N82-11144
- Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475
- Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253
- FLUIDS**
- Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754
- Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c 14 N73-13435
- Low outgassing polydimethylsiloxane material and preparation thereof  
[NASA-CASE-GSC-11358-1] c 06 N73-26100
- Fluid mass sensor for a zero gravity environment  
[NASA-CASE-MSC-14653-1] c 35 N77-19385
- Self-charging metering and dispensing device for fluids  
[NASA-CASE-MSC-20275-1] c 35 N85-21595
- FLUORESCENCE**
- Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
[NASA-CASE-XGS-01231] c 14 N70-41676
- Internal work light Patent  
[NASA-CASE-XKS-05932] c 09 N71-26787
- Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c 25 N74-26947
- Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c 45 N75-27585
- Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c 74 N81-24900
- Optical multiple sample vacuum integrating sphere  
[NASA-CASE-GSC-12849-1] c 74 N86-26190
- FLUORIDES**
- Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710

- Corrosion resistant beryllium Patent  
[NASA-CASE-LEW-10327] c 17 N71-33408
- Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c 06 N72-20121
- FLUORINATION**
- Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-2] c 06 N72-27151
- Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098
- FLUORINE**
- Reaction of fluorine with polyperfluoropolyenes  
[NASA-CASE-NPO-10862] c 06 N72-22107
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259
- Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N86-32570
- FLUORINE COMPOUNDS**
- Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c 27 N79-21191
- Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491
- FLUORO COMPOUNDS**
- New polymers of perfluorobutadiene and method of manufacture Patent application  
[NASA-CASE-NPO-10863] c 06 N70-11251
- Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252
- Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c 06 N73-30101
- Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c 06 N73-30102
- Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c 06 N73-33076
- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228
- The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- FLUOROCARBONS**
- Electrically conductive fluorocarbon polymer  
[NASA-CASE-XLE-06774-2] c 06 N72-25150
- FLUOROPOLYMERS**
- Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440
- Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521
- Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N86-32570
- FLUTTER**
- Antiflutter ball check valve Patent  
[NASA-CASE-XNP-01152] c 15 N70-41811
- Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-28004
- Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373
- Remote pivot decoupler pylon: Wing/store suppression  
[NASA-CASE-LAR-13173-1] c 05 N85-19981
- Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1] c 09 N86-31594
- FLUTTER ANALYSIS**
- Model mount system for testing flutter  
[NASA-CASE-LAR-12950-1] c 09 N84-34448
- FLUX (RATE)**
- Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c 14 N71-27325
- Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-28575
- FLUX DENSITY**
- Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent  
[NASA-CASE-XLE-00243] c 14 N70-38602
- Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-28575
- FLUXES**
- Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c 18 N71-15688
- Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078
- FLYWHEELS**
- Energy storage apparatus  
[NASA-CASE-GSC-12030-1] c 44 N78-24608
- Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c 37 N79-10422
- Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10888-1] c 44 N79-14527
- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c 24 N81-29163
- Bi-directional control system for energy flow in a solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N84-32913
- Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N86-20396
- FOAMS**
- Foam generator Patent  
[NASA-CASE-XLA-00838] c 03 N70-36778
- Method for continuous variation of propellant flow and thrust in propulsive devices Patent  
[NASA-CASE-XLE-00177] c 28 N70-40367
- Filament wound container Patent  
[NASA-CASE-XLE-03803] c 15 N71-23616
- Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25929
- Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-28155
- Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779
- Thickness measuring and injection device Patent  
[NASA-CASE-MFS-20261] c 14 N71-27005
- Method of making foamed materials in zero gravity  
[NASA-CASE-XMF-09902] c 15 N72-11387
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10484-1] c 27 N74-12812
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116
- Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807
- Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126
- Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841
- Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N86-32570
- FOCI**
- High speed multi focal plane optical system  
[NASA-CASE-GSC-12693-1] c 74 N83-36898
- FOCUSING**
- X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHQ-04106] c 14 N70-40240
- Focusing system for an ion source having apertured electrodes Patent  
[NASA-CASE-NPO-03332] c 09 N71-10618
- Petzval type objective including field shaping lens Patent  
[NASA-CASE-GSC-10700] c 23 N71-30027
- Absolute focus lock for microscopes  
[NASA-CASE-LAR-10184] c 14 N72-22445
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c 33 N74-10195
- Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014
- Multiplate focusing collimator --- for scanning small near radiation sources  
[NASA-CASE-MFS-20932-1] c 35 N75-19618
- RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c 44 N78-28594
- Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712
- Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952
- Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N86-24978
- FOG**
- Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c 23 N75-14834
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212
- Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N84-32398
- FOILS (MATERIALS)**
- Foil seal  
[NASA-CASE-XLE-05130] c 15 N69-21362
- Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c 24 N75-33181
- Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c 24 N81-14000
- Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235
- Diffusion oxygen barrier coating A02/MF A01  
[NASA-CASE-LAR-13474-1-SB] c 26 N86-24814
- FOLDING**
- Folding apparatus Patent  
[NASA-CASE-XLA-00137] c 15 N70-33180
- FOLDING STRUCTURES**
- Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924
- Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMF-00437] c 07 N70-40202
- Folding boom assembly Patent  
[NASA-CASE-XGS-00938] c 32 N70-41367
- Foldable conduit Patent  
[NASA-CASE-XLE-00820] c 32 N70-41579
- Foldable solar concentrator Patent  
[NASA-CASE-XLA-04822] c 03 N70-41580
- Wing deployment method and apparatus Patent  
[NASA-CASE-XMS-00907] c 02 N70-41630
- Variable sweep aircraft Patent  
[NASA-CASE-XLA-03659] c 02 N71-11041
- Radiator deployment actuator Patent  
[NASA-CASE-MSC-11817-1] c 15 N71-26611
- Foldable construction block  
[NASA-CASE-MSC-12233-1] c 15 N72-25454
- Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c 18 N75-27040
- Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c 32 N80-29539
- Foldable beam  
[NASA-CASE-LAR-12077-1] c 31 N81-25259
- Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c 31 N81-27324
- Foldable self-erecting joint --- space erectable structures  
[NASA-CASE-MSC-20635-1] c 18 N84-32424
- Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13096-1] c 31 N86-19479
- Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789
- Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N86-20803
- Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- Deployable geodesic truss structure A01  
[NASA-CASE-LAR-13113-1] c 31 N86-24867
- Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789
- Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706
- Deployable M-braced truss structure  
[NASA-CASE-LAR-13081-1] c 37 N86-32737
- FOOD**
- Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c 14 N73-13435
- FOOTPRINTS**
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918
- FORCE**
- Ferrofluidic solenoid  
[NASA-CASE-NPO-11738-1] c 09 N73-30185
- FORCE DISTRIBUTION**
- Device for handling heavy loads  
[NASA-CASE-XNP-04969] c 11 N69-27466
- Two force component measuring device Patent  
[NASA-CASE-XAC-04886-1] c 14 N71-20439
- Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834
- Impact monitoring apparatus  
[NASA-CASE-MSC-15626-1] c 14 N72-25411
- Variable direction force coupler  
[NASA-CASE-MFS-20317] c 15 N73-13463
- Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329
- FORCED VIBRATION**
- Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679

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[NASA-CASE-LAR-12326-1] c 02 N81-14968
- FORMALDEHYDE**  
Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174  
Synthesis of 2,4,8,10-tetroxaspiro[5,5]undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187
- FORMAT**  
Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c 60 N79-20751
- FORMATES**  
Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c 06 N73-30103
- FORMING TECHNIQUES**  
Wire grid forming apparatus Patent  
[NASA-CASE-XLE-00023] c 15 N70-33330  
Method for forming plastic materials Patent  
[NASA-CASE-XMS-05516] c 15 N71-17803  
Method of making tubes Patent  
[NASA-CASE-XGS-04175] c 15 N71-18579  
Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24833  
Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836  
Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c 15 N72-24522  
Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c 26 N74-10521  
Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c 31 N74-32920  
Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c 37 N75-26371  
Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c 37 N75-31446  
Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c 37 N76-14461  
Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c 71 N78-10837  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436  
Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c 26 N78-24333  
Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c 44 N79-31752  
Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319  
Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176
- FOSSIL FUELS**  
Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709
- FOUNDATIONS**  
Expandable support means  
[NASA-CASE-NPO-11059] c 15 N72-17454  
Adjustable securing base  
[NASA-CASE-MSC-19666-1] c 37 N78-17383
- FOURIER TRANSFORMATION**  
Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c 60 N75-13539
- FRACTIONATION**  
Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184  
Electrophoretic fractional elution apparatus employing a rotational seal fraction collector  
[NASA-CASE-MFS-23284-1] c 37 N80-14397  
Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126  
Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431
- FRACTURE MECHANICS**  
Apparatus for positioning and loading a test specimen Patent  
[NASA-CASE-XLE-01300] c 15 N70-41993
- FRACTURE STRENGTH**  
Process for making a high toughness-high strength ion alloy  
[NASA-CASE-LEW-12542-2] c 26 N79-22271  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484  
Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235

- Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456
- FRAMES**  
Articulated multiple couch assembly Patent  
[NASA-CASE-MSC-11253] c 05 N71-12343  
Soft frame adjustable eyeglasses Patent  
[NASA-CASE-XMS-06064] c 05 N71-23096  
Expandable space frames  
[NASA-CASE-ERC-10365-1] c 31 N73-32749  
Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c 36 N82-16396  
Inorganic spark chamber frame and method of making the same  
[NASA-CASE-GSC-12354-1] c 35 N82-24471
- FRAMING CAMERAS**  
High speed photo-optical time recording  
[NASA-CASE-KSC-10294] c 14 N72-18411
- FREE FLIGHT TEST APPARATUS**  
Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677  
Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604  
Test unit free-flight suspension system Patent  
[NASA-CASE-XLA-00939] c 11 N71-15926
- FREE WING AIRCRAFT**  
Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061
- FREEZE DRYING**  
Modification of the physical properties of freeze-dried rice  
[NASA-CASE-MSC-13540-1] c 05 N72-33096
- FREEZING**  
System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694  
Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442
- FREON**  
Solar energy power system --- using Freon  
[NASA-CASE-MFS-21628-1] c 44 N75-32581
- FREQUENCIES**  
Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c 33 N74-10194  
High efficiency multifrequency feed  
[NASA-CASE-GSC-11909] c 32 N74-20863  
Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N85-30201
- FREQUENCY ANALYZERS**  
Digital frequency discriminator Patent  
[NASA-CASE-MFS-14322] c 08 N71-18692  
Broadband frequency discriminator Patent  
[NASA-CASE-NPO-10096] c 07 N71-24583  
Audio frequency marker system  
[NASA-CASE-NPO-11147] c 14 N72-27408  
Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c 60 N75-13539  
Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c 33 N77-13315
- FREQUENCY CONTROL**  
Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987  
Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c 09 N70-38604  
Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995  
Automatic frequency discriminators and control for a phase-lock loop providing frequency preset capabilities Patent  
[NASA-CASE-XMF-08665] c 10 N71-19467  
Linear accelerator frequency control system Patent  
[NASA-CASE-XGS-05441] c 10 N71-22962  
Tuning arrangement for an electron discharge device or the like Patent  
[NASA-CASE-XNP-09771] c 09 N71-24841  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c 32 N74-11000  
Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c 32 N74-19790  
Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c 36 N75-31427  
Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c 32 N78-31321  
Cam-operated pitch-change apparatus  
[NASA-CASE-LEW-13050-1] c 07 N79-14095  
Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349  
High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454

- Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943  
Automatic oscillator frequency control system  
[NASA-CASE-GSC-12804-1] c 33 N86-20668
- FREQUENCY CONVERTERS**  
Frequency to analog converter Patent  
[NASA-CASE-XNP-07040] c 08 N71-12500  
Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c 08 N71-18752  
Voltage to frequency converter Patent  
[NASA-CASE-GSC-10022-1] c 10 N71-25882  
Family of frequency to amplitude converters  
[NASA-CASE-MSC-12395] c 09 N72-25257  
Variable frequency inverter for ac induction motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c 33 N75-15874
- FREQUENCY DISCRIMINATORS**  
PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c 33 N81-33405  
Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N86-20679
- FREQUENCY DISTRIBUTION**  
Antenna system using parasitic elements and two driven elements at 90 deg angle fed 180 deg out of phase Patent  
[NASA-CASE-XLA-00414] c 07 N70-38200  
Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810  
Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323
- FREQUENCY DIVIDERS**  
Low phase noise digital frequency divider  
[NASA-CASE-NPO-11569] c 10 N73-26229  
Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c 33 N74-10223  
Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c 33 N75-31330  
Electronic analog divider  
[NASA-CASE-LEW-11881-1] c 33 N77-17354
- FREQUENCY DIVISION MULTIPLEXING**  
Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c 07 N71-24621  
Frequency division multiplex technique  
[NASA-CASE-KSC-10521] c 07 N73-20176
- FREQUENCY MEASUREMENT**  
Measurement system  
[NASA-CASE-MFS-20658-1] c 14 N73-30386  
Frequency measurement by coincidence detection with standard frequency  
[NASA-CASE-MSC-14649-1] c 33 N76-16331  
Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338
- FREQUENCY MODULATION**  
Accelerometer with FM output Patent  
[NASA-CASE-XLA-00492] c 14 N70-34799  
Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281  
Bi-carrier demodulator with modulation Patent  
[NASA-CASE-XMF-01160] c 07 N71-11298  
Optical tracker having overlapping reticles on parallel axes Patent  
[NASA-CASE-XGS-05715] c 23 N71-16100  
Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
[NASA-CASE-HQN-10654-1] c 16 N73-13489  
Junction range finder  
[NASA-CASE-KSC-10108] c 14 N73-25461  
Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c 32 N74-19790  
Symmetrical odd-modulus frequency divider  
[NASA-CASE-NPO-13426-1] c 33 N75-31330  
Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c 33 N77-17351  
FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264  
Thickness measurement system  
[NASA-CASE-MFS-23721-1] c 31 N79-28370  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510  
Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227
- FREQUENCY MULTIPLIERS**  
Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c 10 N71-26414  
Open loop digital frequency multiplier  
[NASA-CASE-MSC-12709-1] c 33 N77-24375
- FREQUENCY RANGES**  
Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964

- Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266
- Technique for extending the frequency range of digital dividers  
[NASA-CASE-LAR-10730-1] c 33 N74-10223
- Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c 32 N76-14321
- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195
- FREQUENCY SCANNING**
- Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c 32 N79-10262
- Frequency-scanning particle size spectrometer  
[NASA-CASE-NPO-13606-2] c 35 N80-18364
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341
- FREQUENCY SHIFT**
- Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39878
- Serrordyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c 07 N71-16088
- Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c 07 N71-20814
- Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828
- Laser Doppler velocity simulator --- to induce frequency shift  
[NASA-CASE-LAR-12176-1] c 36 N80-16321
- FREQUENCY SHIFT KEYING**
- Frequency shift keyed demodulator Patent  
[NASA-CASE-XGS-02889] c 07 N71-11282
- Frequency shift keying apparatus Patent  
[NASA-CASE-XGS-01537] c 07 N71-23405
- A single frequency multitransmitter telemetry system  
[NASA-CASE-LAR-13006-1] c 17 N83-20995
- FREQUENCY STABILITY**
- Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c 16 N71-18614
- Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331
- FREQUENCY STANDARDS**
- Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099
- Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c 35 N76-15436
- Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323
- External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c 36 N79-14362
- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186
- FREQUENCY SYNCHRONIZATION**
- Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
[NASA-CASE-XNP-03623] c 09 N73-28084
- Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323
- System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296
- FREQUENCY SYNTHESIZERS**
- Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525
- System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296
- Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443
- Reactanceless synthesized impedance bandpass amplifier  
[NASA-CASE-GSC-12788-1] c 33 N85-29145
- JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515
- FRICTION**
- Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371
- Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231
- Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288
- FRICTION DRAG**
- Combined riblet and LEBU drag reduction system  
[NASA-CASE-LAR-13286-1] c 02 N85-28922
- Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N86-26575
- FRICTION FACTOR**
- Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984
- Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492
- FRICTION MEASUREMENT**
- Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995
- Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c 35 N78-31489
- A two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N85-21610
- Two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N86-32696
- FRICTION REDUCTION**
- Low friction magnetic recording tape Patent  
[NASA-CASE-XGS-00373] c 23 N71-15978
- Production of hollow components for rolling element bearings by diffusion welding  
[NASA-CASE-LEW-11026-1] c 15 N73-33383
- FRICTIONLESS ENVIRONMENTS**
- Air bearing Patent  
[NASA-CASE-XMF-01887] c 15 N71-10617
- Air cushion lift pad Patent  
[NASA-CASE-MFS-14685] c 31 N71-15689
- Method and apparatus of simulating zero gravity conditions Patent  
[NASA-CASE-MFS-12750] c 27 N71-16223
- FROST**
- Insulating structure Patent  
[NASA-CASE-XMF-00341] c 15 N70-33323
- Device for determining frost depth and density  
[NASA-CASE-NFS-25754-1] c 35 N84-28018
- FUEL CAPSULES**
- Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846
- FUEL CELL POWER PLANTS**
- Reactant pressure differential control for fuel cell gases  
[NASA-CASE-MSC-20127-2] c 37 N85-34403
- FUEL CELLS**
- Method of making membranes  
[NASA-CASE-XNP-04264] c 03 N69-21337
- Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904
- Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022
- Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044
- Reconstituted asbestos matrix --- for use in fuel or electrolysis cells  
[NASA-CASE-MSC-12568-1] c 24 N76-14204
- Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c 44 N79-10513
- Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734
- Reactant pressure differential control for fuel cell gases  
[NASA-CASE-MSC-20127-2] c 37 N85-34403
- FUEL COMBUSTION**
- Fuel combustor  
[NASA-CASE-LEW-12137-1] c 25 N78-10224
- Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958
- FUEL CONSUMPTION**
- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389
- FUEL CONTROL**
- Attitude and propellant flow control system and method Patent  
[NASA-CASE-XMF-00185] c 21 N70-34539
- Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c 32 N71-16103
- Buoyant anti-slosh system Patent  
[NASA-CASE-XLA-04605] c 32 N71-16106
- Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654
- Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432
- Gas turbine engine fuel control  
[NASA-CASE-LEW-11187-1] c 28 N73-19783
- Automotive gas turbine fuel control  
[NASA-CASE-LEW-12785-1] c 37 N78-24545
- Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483
- Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958
- FUEL FLOW**
- System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772
- FUEL FLOW REGULATORS**
- Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192
- Passively regulated water electrolysis rocket engine Patent  
[NASA-CASE-XGS-08729] c 28 N71-14044
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106
- FUEL GAGES**
- Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c 14 N71-29134
- FUEL INJECTION**
- Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535
- Rocket engine injector Patent  
[NASA-CASE-MFS-00111] c 28 N70-38199
- Injector assembly for liquid fueled rocket engines Patent  
[NASA-CASE-XMF-00968] c 28 N71-15660
- Injection head for delivering liquid fuel and oxidizers  
[NASA-CASE-NPO-10046] c 28 N72-17843
- Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c 15 N73-27406
- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129
- Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314
- Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958
- FUEL OILS**
- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106
- FUEL PUMPS**
- Fuel injection pump for internal combustion engines Patent  
[NASA-CASE-MSC-12139-1] c 28 N71-14058
- FUEL SYSTEMS**
- Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781
- System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772
- Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502
- Fuel combustor  
[NASA-CASE-LEW-12137-1] c 25 N78-10224
- Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c 37 N79-11403
- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129
- Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029
- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389
- FUEL TANK PRESSURIZATION**
- Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c 15 N70-34247
- Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042
- Propellant tank pressurization system Patent  
[NASA-CASE-XNP-00650] c 27 N71-28929
- FUEL TANKS**
- Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988
- Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c 32 N71-16103
- Buoyant anti-slosh system Patent  
[NASA-CASE-XLA-04605] c 32 N71-16106
- Instrument for measuring the dynamic behavior of liquids Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387
- Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186
- High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523
- Tanker orbit transfer vehicle and method  
[NASA-CASE-MSC-20543-1] c 18 N84-22610
- Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841
- FUEL VALVES**
- Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-36535
- Semitoroidal diaphragm cavitating valve Patent  
[NASA-CASE-XNP-09704] c 12 N71-18615



- Filler valve Patent  
[NASA-CASE-XNP-01747] c 15 N71-23024  
Combination automatic-starting electrical plasma torch  
and gas shutoff valve --- for satellite attitude control  
[NASA-CASE-XLE-10717] c 37 N75-29426

**FUEL-AIR RATIO**

- Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195

**FUELS**

- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103

**FUNCTION GENERATORS**

- Line following servosystem Patent  
[NASA-CASE-XAC-00001] c 15 N71-28952  
Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c 08 N72-20176  
Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-10503-1] c 09 N72-21248  
Function generator for synthesizing complex vibration  
mode patterns  
[NASA-CASE-LAR-10310-1] c 10 N73-20253  
Derivation of a tangent function using an integrated  
circuit four-quadrant multiplier  
[NASA-CASE-MS-C-13907-1] c 10 N73-26230

**FURLEABLE ANTENNAS**

- Unfurlable structure including coiled strips thrust  
launched upon tension release Patent  
[NASA-CASE-HQN-00937] c 07 N71-28979  
Singly-curved reflector for use in high-gain antennas  
[NASA-CASE-NPO-11361] c 07 N72-32169  
Furlable antenna --- antenna design  
[NASA-CASE-NPO-13553-1] c 33 N76-32457

**FURNACES**

- High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147  
Black-body furnace Patent  
[NASA-CASE-XLE-01399] c 33 N71-15625  
Induction furnace with perforated tungsten foil shielding  
Patent  
[NASA-CASE-XLE-04026] c 14 N71-23267  
High temperature furnace for melting materials in  
space  
[NASA-CASE-MFS-20710] c 11 N72-23215  
High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523  
Exothermic furnace module  
[NASA-CASE-MFS-25707-1] c 35 N82-26631  
Apparatus and method for heating a material in a  
transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220  
Apparatus and furnace for containerless processing of  
high temperature materials in space  
[NASA-CASE-MFS-28087-1] c 35 N86-23899

**FUSELAGES**

- Fuselage structure using advanced technology fiber  
reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384  
Adapter for mounting a microphone flush with the  
external surface of the skin of a pressurized aircraft  
[NASA-CASE-FRC-11072-1] c 05 N83-27975  
Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400

**FUSION (MELTING)**

- Bonding graphite with fused silver chloride  
[NASA-CASE-XGS-00963] c 15 N69-39735  
Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088  
One-step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c 33 N82-26571  
Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748  
Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930  
Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083

**FUSION WELDING**

- Method for producing a solar cell having an integral  
protective covering  
[NASA-CASE-XGS-04531] c 03 N69-24267  
Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c 15 N71-20393  
Butt welder for fine gauge tungsten/rhenium  
thermocouple wire  
[NASA-CASE-LAR-10103-1] c 15 N73-14468  
Diffusion welding in air --- solid state welding of butt  
joint by fusion welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c 37 N74-18128

**G****GADOLINIUM**

- Method of making a silicon semiconductor device  
Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607

- Gd or Sm doped silicon semiconductor composition  
Patent  
[NASA-CASE-XLE-10715] c 26 N71-23292

**GALILEO PROJECT**

- Reed-Solomon decoder --- applicable to Galileo Project  
requirements  
[NASA-CASE-NPO-15982-1] c 60 N85-20680

**GALLIUM**

- Floating two force component measuring device  
Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790

**GALLIUM ARSENIDES**

- GaAs solar detector using manganese as a doping agent  
Patent  
[NASA-CASE-NPO-01328] c 26 N71-18064  
Simple method of making photovoltaic junctions  
Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027  
Method of changing the conductivity of vapor deposited  
gallium arsenide by the introduction of water into the vapor  
deposition atmosphere Patent  
[NASA-CASE-XNP-01961] c 26 N71-29156

- Vapor phase growth of groups 3-5 compounds by  
hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043

- Vapor deposition apparatus --- semiconductors and  
gallium arsenides  
[NASA-CASE-HQN-10462] c 25 N75-29192

- Low stress semiconductor-insulator interface for  
cryogenic device applications  
[NASA-CASE-NPO-16394-1] c 76 N85-20906

- GaAs Schottky barrier photo-responsive device and  
method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150

**GALVANIC SKIN RESPONSE**

- Method and apparatus for attaching physiological  
monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293

**GAMMA RAY SPECTROMETERS**

- Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659  
Method and apparatus for mapping the distribution of  
chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279

**GAMMA RAYS**

- Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c 14 N73-30392  
Low intensity X-ray and gamma-ray imaging device ---  
fiber optics  
[NASA-CASE-GSC-12263-1] c 74 N79-20857  
Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920  
Three-dimensional and tomographic imaging device for  
X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281

**GANTRY CRANES**

- Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c 03 N72-25021

**GAPS**

- Electromagnetic transducer recording head having a  
laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392  
Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709

**GARMENTS**

- Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189  
Flexible joint for pressurizable garment  
[NASA-CASE-MS-C-11072] c 54 N74-32546  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736  
Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MS-C-18381-1] c 52 N81-28740  
Thermal garment  
[NASA-CASE-XMS-03694-1] c 54 N82-29002

**GAS ANALYSIS**

- Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c 14 N71-10774  
Microbalance including crystal oscillators for measuring  
contaminates in a gas system Patent  
[NASA-CASE-NPO-10144] c 14 N71-17701  
Time of flight mass spectrometer with feedback means  
from the detector to the low source and a specific counter  
Patent  
[NASA-CASE-XNP-01056] c 14 N71-23041  
Dual resonant cavity absorption cell Patent  
[NASA-CASE-LAR-10305] c 14 N71-26137  
Ion microprobe mass spectrometer for analyzing fluid  
materials Patent  
[NASA-CASE-ERC-10014] c 14 N71-28863  
Nondispersive gas analyzing method and apparatus  
wherein radiation is serially passed through a reference  
and unknown gas  
[NASA-CASE-ARC-10308-1] c 06 N72-31141

- Method and apparatus for determining the contents of  
contained gas samples  
[NASA-CASE-GSC-10903-1] c 14 N73-12444  
Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c 35 N74-26949  
Fast scan control for deflection type mass  
spectrometers  
[NASA-CASE-LAR-11428-1] c 35 N74-34857  
NDIR gas analyzer based on absorption modulation  
ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c 35 N75-30502  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656  
Nulling device for detection of trace gases by NDIR  
absorption  
[NASA-CASE-ARC-10760-1] c 25 N76-22323  
Analysis of volatile organic compounds --- trace amounts  
of organic volatiles in gas samples  
[NASA-CASE-MS-C-14428-1] c 23 N77-17161  
Fluid sampling device  
[NASA-CASE-GSC-12143-1] c 35 N77-32456  
Stark cell optoacoustic detection of constituent gases  
in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015  
Stark effect spectrophone for continuous absorption  
spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159

**GAS BAGS**

- Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085

**GAS BEARINGS**

- Externally pressurized fluid bearing Patent  
[NASA-CASE-XMF-00515] c 15 N70-34664  
Slit regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c 15 N70-38620  
Air bearing Patent  
[NASA-CASE-XMF-00339] c 15 N70-39896  
Air bearing Patent  
[NASA-CASE-XMF-01887] c 15 N71-10617  
Fluid power transmission Patent  
[NASA-CASE-XMS-01445] c 12 N71-16031  
Bismuth-lead coatings for gas bearings used in  
atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739  
Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c 15 N71-23812  
Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c 15 N71-28465  
Angular displacement indicating gas bearing support  
system Patent  
[NASA-CASE-XLA-09346] c 15 N71-28740  
Air bearing assembly for curved surfaces  
[NASA-CASE-MFS-20423] c 15 N72-11388  
Air bearing  
[NASA-CASE-WLP-10002] c 15 N72-17451  
Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459  
Thrust bearing  
[NASA-CASE-LEW-11949-1] c 37 N76-29588  
Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c 37 N79-10418  
Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606

**GAS CHROMATOGRAPHY**

- Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c 06 N69-39936  
Baseline stabilization system for ionization detector  
Patent  
[NASA-CASE-XNP-03128] c 10 N70-41991  
Procedure and apparatus for determination of water in  
nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094  
Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c 06 N72-25146  
Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428  
Method and apparatus for determining the contents of  
contained gas samples  
[NASA-CASE-GSC-10903-1] c 14 N73-12444  
Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c 35 N75-26334  
Chelate-modified polymers for atmospheric gas  
chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383

**GAS COMPOSITION**

- Method and means for helium/hydrogen ratio  
measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334  
Microwave limb sounder --- measuring trace gases in  
the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685  
Mobile sampler for use in acquiring samples of terrestrial  
atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217  
Moisture content and gas sampling device  
[NASA-CASE-MS-C-18866-1] c 35 N85-29213



**GAS COOLED REACTORS**

Gas core nuclear reactor Patent  
[NASA-CASE-LEW-10250-1] c 22 N71-28759

**GAS COOLING**

Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190  
Gas cooled high temperature thermocouple Patent  
[NASA-CASE-XLE-09475-1] c 33 N71-15568  
Apparatus and method for heating a material in a transparent ampoule — crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220

**GAS DENSITY**

Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681  
Method for measuring the characteristics of a gas Patent  
[NASA-CASE-XLA-03375] c 16 N71-24074  
Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994  
Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597  
Method of producing crystalline materials  
[NASA-CASE-NPO-10440] c 15 N72-21466  
Wide range dynamic pressure sensor  
[NASA-CASE-ARC-10263-1] c 14 N72-22438  
Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c 14 N73-30394  
Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector — for determining density of gas  
[NASA-CASE-ARC-10631-1] c 74 N76-20958  
Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417

**GAS DETECTORS**

Method for detecting hydrogen gas  
[NASA-CASE-XMF-03873] c 06 N69-39733  
Hydrogen leak detection device Patent  
[NASA-CASE-MFS-11537] c 14 N71-20442  
Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896  
Miniature carbon dioxide sensor and methods  
[NASA-CASE-MS-C-13332-1] c 14 N72-21408  
Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c 45 N75-27585  
Carbon monoxide monitor — using real time operation  
[NASA-CASE-MFS-22060-1] c 35 N75-29380  
Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector — for determining density of gas  
[NASA-CASE-ARC-10631-1] c 74 N76-20958  
Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742  
Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509  
Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c 35 N77-21393  
Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c 35 N78-13400  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015  
Stark effect spectrophone for continuous absorption spectra monitoring — a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159  
Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631

**GAS DISCHARGE TUBES**

Self-repeating plasma generator having communicating annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c 25 N71-21693

**GAS DISCHARGES**

Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c 09 N71-23598  
Multiplex electric discharge gas laser system  
[NASA-CASE-NPO-16433-1] c 36 N86-20778

**GAS EVOLUTION**

Filter system for control of outgas contamination in vacuum Patent  
[NASA-CASE-MFS-14711] c 15 N71-26185

**GAS EXPANSION**

Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051  
Refrigeration apparatus Patent  
[NASA-CASE-XNP-08877] c 15 N71-23025  
Gas operated actuator  
[NASA-CASE-NPO-11340] c 15 N72-33477

**GAS FLOW**

Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c 15 N71-15808  
High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588  
Burst diaphragm flow initiator Patent  
[NASA-CASE-MFS-12915] c 11 N71-17800  
Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01778] c 12 N71-20815  
Respiration monitor  
[NASA-CASE-FRC-10012] c 14 N72-17329  
Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c 11 N72-22245  
Fluidic proportional thruster system  
[NASA-CASE-ARC-10106-1] c 28 N72-22769  
Gas filter mounting structure  
[NASA-CASE-MS-C-12297] c 14 N72-23457  
Pressurized lighting system  
[NASA-CASE-KSC-10644] c 09 N72-27227  
Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025  
Gas flow control device  
[NASA-CASE-NPO-11479] c 15 N73-13482  
Compact hydrogenator  
[NASA-CASE-MSC-11682-1] c 35 N74-15127  
Apparatus for establishing flow of a fluid mass having a known velocity  
[NASA-CASE-MFS-21424-1] c 34 N74-27730  
Condensate removal device for heat exchanger  
[NASA-CASE-MS-C-14143-1] c 77 N75-20139  
Flow measuring apparatus  
[NASA-CASE-LEW-12078-1] c 35 N75-30503  
Gas compression apparatus  
[NASA-CASE-MS-C-14757-1] c 35 N78-10428  
Variable cycle gas turbine engines  
[NASA-CASE-LEW-12918-1] c 37 N78-17384  
Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N82-33681  
Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177  
Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555  
Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433  
Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547

**GAS GENERATORS**

Specialized halogen generator for purification of water Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933  
Quick disconnect coupling  
[NASA-CASE-NPO-11202] c 15 N72-25450  
Electrolytic gas operated actuator  
[NASA-CASE-NPO-11369] c 15 N73-13467  
Vortex breech high pressure gas generator  
[NASA-CASE-LAR-10549-1] c 31 N73-13898  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N78-16446  
Hydrogen-rich gas generator  
[NASA-CASE-NPO-13464-1] c 44 N78-18642  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c 44 N76-29704  
Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c 44 N77-10636

**GAS GUNS**

Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628

**GAS HEATING**

Bimetallic fluid displacement apparatus — for stirring and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c 35 N74-15126

**GAS INJECTION**

Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c 27 N71-21819  
Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c 35 N74-15127  
Gas chromatograph injection system  
[NASA-CASE-ARC-10344-2] c 35 N75-26334  
In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452  
Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089  
Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579  
Solid sorbent air sampler  
[NASA-CASE-MS-C-20653-1] c 35 N86-26595

**GAS IONIZATION**

Electrostatic plasma modulator for space vehicle re-entry communication Patent  
[NASA-CASE-XLA-01400] c 07 N70-41331

A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090  
Modulated hydrogen ion flame detector  
[NASA-CASE-ARC-10322-1] c 35 N76-18403  
Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366  
Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c 72 N80-33186

**GAS JETS**

Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21852

**GAS LASERS**

Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c 16 N71-18614  
Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c 36 N75-32441  
Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428  
Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366  
Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402  
Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542  
Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15518-1] c 36 N84-22943  
Magnetically switched power supply systems for lasers  
[NASA-CASE-NPO-16402-1] c 36 N85-29265  
Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204

**GAS LUBRICANTS**

Gas lubricant compositions Patent  
[NASA-CASE-XLE-00353] c 18 N70-39897  
Thrust bearing  
[NASA-CASE-LEW-11949-1] c 37 N76-29588  
Cantilever mounted resilient pad gas bearing  
[NASA-CASE-LEW-12569-1] c 37 N79-10418  
Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490

**GAS MASERS**

Solid state chemical source for ammonia beam maser Patent  
[NASA-CASE-XGS-01504] c 16 N70-41578  
Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
[NASA-CASE-HON-10654-1] c 16 N73-13489  
Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029  
Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c 35 N76-15436

**GAS MIXTURES**

Gas analyzer for bi-gaseous mixtures Patent  
[NASA-CASE-XLA-01131] c 14 N71-10774  
Vapor pressure measuring system and method Patent  
[NASA-CASE-XMS-01618] c 14 N71-20741  
Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c 18 N71-20742  
Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c 06 N72-25146  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N78-29700  
Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c 44 N77-10636  
Chemical vapor deposition reactor — providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c 25 N79-28253

**GAS PIPES**

Fluid flow restrictor Patent  
[NASA-CASE-NPO-10117] c 15 N71-15808

**GAS PRESSURE**

Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233  
Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681  
Wide range dynamic pressure sensor  
[NASA-CASE-ARC-10263-1] c 14 N72-22438  
Measurement of gas production of microorganisms — using pressure sensors  
[NASA-CASE-LAR-11326-1] c 35 N75-33368  
Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c 33 N77-21316  
Pressure limiting propellant actuating system  
[NASA-CASE-MS-C-18179-1] c 20 N80-18097

Method and apparatus for producing gas-filled hollow spheres — target pellets for inertial confinement fusion [NASA-CASE-NPO-14596-3] c 31 N83-31896

**GAS STREAMS**

Method for measuring the characteristics of a gas Patent [NASA-CASE-XLA-03375] c 16 N71-24074  
Stagnation pressure probe — for measuring pressure of supersonic gas streams [NASA-CASE-LAR-11139-1] c 35 N74-32878  
Variable mixer propulsion cycle [NASA-CASE-LEW-12917-1] c 07 N78-18067  
Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water [NASA-CASE-MSC-16258-1] c 45 N79-12584  
Gas levitator having fixed levitation node for containerless processing [NASA-CASE-MFS-25509-1] c 35 N83-24828

**GAS TEMPERATURE**

Method for measuring the characteristics of a gas Patent [NASA-CASE-XLA-03375] c 16 N71-24074

**GAS TRANSPORT**

Purging means and method for Xenon arc lamps [NASA-CASE-NPO-11978] c 31 N78-17238

**GAS TUBES**

Toggle mechanism for pinching metal tubes [NASA-CASE-GSC-12274-1] c 37 N79-28550

**GAS TURBINE ENGINES**

Gas turbine engine fuel control [NASA-CASE-LEW-11187-1] c 28 N73-19793  
Swirl can primary combustor [NASA-CASE-LEW-11326-1] c 23 N73-30665  
Controlled separation combustor — airflow distribution in gas turbine engines [NASA-CASE-LEW-11593-1] c 20 N76-14190  
Fused silicide coatings containing discrete particles for protecting niobium alloys — used in space shuttle thermal protection systems and turbine engine components [NASA-CASE-LEW-11179-1] c 27 N76-16229  
Dual output variable pitch turbofan actuation system [NASA-CASE-LEW-12419-1] c 07 N77-14025  
Oil cooling system for a gas turbine engine [NASA-CASE-LEW-12830-1] c 07 N77-23106  
Blade retainer assembly [NASA-CASE-LEW-12608-1] c 07 N77-27116  
Nickel base alloy — for gas turbine engine stator vanes [NASA-CASE-LEW-12270-1] c 26 N77-32280  
Bearing seat usable in a gas turbine engine [NASA-CASE-LEW-12477-1] c 37 N77-32501  
Oil cooling system for a gas turbine engine [NASA-CASE-LEW-12321-1] c 37 N78-10467  
Variable cycle gas turbine engines [NASA-CASE-LEW-12916-1] c 37 N78-17384  
Integrated gas turbine engine-nacelle [NASA-CASE-LEW-12389-2] c 07 N78-18066  
Variable mixer propulsion cycle [NASA-CASE-LEW-12917-1] c 07 N78-18067  
Automotive gas turbine fuel control [NASA-CASE-LEW-12785-1] c 37 N78-24545  
Gas turbine engine with recirculating bleed [NASA-CASE-LEW-12452-1] c 07 N78-25089  
Independent power generator [NASA-CASE-LAR-11208-1] c 44 N78-32539  
Redundant disc [NASA-CASE-LEW-12496-1] c 07 N78-33101  
Integrated gas turbine engine-nacelle [NASA-CASE-LEW-12389-3] c 07 N79-14096  
Variable area exhaust nozzle [NASA-CASE-LEW-12378-1] c 07 N79-14097  
Power control for hot gas engines [NASA-CASE-NPO-14220-1] c 37 N81-14318  
Curved centerline air intake for a gas turbine engine [NASA-CASE-LEW-13201-1] c 07 N81-14999  
Apparatus for sensor failure detection and correction in a gas turbine engine control system [NASA-CASE-LEW-12907-2] c 07 N81-19115  
Active clearance control system for a turbomachine [NASA-CASE-LEW-12938-1] c 07 N82-32366  
Control means for a gas turbine engine [NASA-CASE-LEW-14586-1] c 07 N83-31603  
Silicon-slurry/aluminide coating — protecting gas turbine engine vanes and blades [NASA-CASE-LEW-13343] c 26 N83-31795  
Apparatus for improving the fuel efficiency of a gas turbine engine [NASA-CASE-LEW-13142-1] c 07 N83-36029  
Tip cap for a rotor blade [NASA-CASE-LEW-13654-1] c 07 N84-22560  
Combustor liner construction [NASA-CASE-LEW-14035-1] c 07 N84-24577  
Air modulation apparatus [NASA-CASE-LEW-13524-1] c 07 N84-33410  
Dual clearance squeeze film damper [NASA-CASE-LEW-13506-1] c 37 N85-33490

Oxidizing seal for a turbine tip gas path [NASA-CASE-LEW-14053-1] c 37 N85-34402  
Compliant hydrodynamic fluid journal bearing [NASA-CASE-LEW-13670-1] c 37 N86-19606  
Method for improving the fuel efficiency of a gas turbine engine [NASA-CASE-LEW-13142-2] c 07 N86-20389  
Thermal stress minimized, two component, turbine shroud seal [NASA-CASE-LEW-14212-1] c 37 N86-32740

**GAS TURBINES**

Gas turbine combustor Patent [NASA-CASE-LEW-10286-1] c 28 N71-28915  
Gas turbine exhaust nozzle — for noise reduction [NASA-CASE-LEW-11569-1] c 07 N74-15453  
Gas turbine engine with convertible accessories [NASA-CASE-LEW-12390-1] c 07 N78-17056  
Counter pumping debris excluder and separator — gas turbine shaft seals [NASA-CASE-LEW-11855-1] c 07 N78-25090  
Direct heating surface combustor [NASA-CASE-LEW-11877-1] c 34 N78-27357  
Apparatus and method for reducing thermal stress in a turbine rotor [NASA-CASE-LEW-12232-1] c 07 N79-10057  
Method and turbine for extracting kinetic energy from a stream of two-phase fluid [NASA-CASE-NPO-14130-1] c 34 N79-20335  
Corrosion resistant thermal barrier coating — protecting gas turbines and other engine parts [NASA-CASE-LEW-13088-1] c 26 N81-25188

**GAS VALVES**

High-temperature, high-pressure spherical segment valve Patent [NASA-CASE-XAC-00074] c 15 N70-34817  
Shrink-fit gas valve Patent [NASA-CASE-XGS-00587] c 15 N70-35087  
Thermally operated valve Patent [NASA-CASE-XLE-00815] c 15 N70-35407  
Transfer valve Patent [NASA-CASE-XAC-01158] c 15 N71-23051  
Slow opening valve — valve design for shuttle portable oxygen system [NASA-CASE-MSC-20112-1] c 37 N85-20338

**GAS WELDING**

Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent [NASA-CASE-XMF-02039] c 15 N71-15871  
Grain refinement control in TIG arc welding [NASA-CASE-MSC-19095-1] c 37 N75-19683

**GAS-LIQUID INTERACTIONS**

Fluid control apparatus and method [NASA-CASE-LAR-11110-1] c 34 N75-26282

**GAS-METAL INTERACTIONS**

Improved refractory coatings — sputtered coatings on substrates that form stable nitrides [NASA-CASE-LEW-23169-2] c 26 N81-16209  
Refractory coatings and method of producing the same [NASA-CASE-LEW-13169-1] c 26 N82-29415

**GASDYNAMIC LASERS**

Diatom infrared gasdynamic laser — for producing different wavelengths [NASA-CASE-ARC-10370-1] c 36 N75-31426

**GASEOUS DIFFUSION**

Gas purged dry box glove Patent [NASA-CASE-XLE-02531] c 05 N71-23080  
Gas core nuclear reactor Patent [NASA-CASE-LEW-10250-1] c 22 N71-28759  
Gas diffusion liquid storage bag and method of use for storing blood [NASA-CASE-NPO-13930-1] c 52 N79-14749

**GASEOUS FISSION REACTORS**

Gas core nuclear reactor Patent [NASA-CASE-LEW-10250-1] c 22 N71-28759

**GASEOUS ROCKET PROPELLANTS**

Ion rocket Patent [NASA-CASE-XLE-00376] c 28 N70-37245  
Continuous detonation reaction engine Patent [NASA-CASE-XMF-06926] c 28 N71-22983

**GASES**

Gas liquefaction and dispensing apparatus Patent [NASA-CASE-NPO-10070] c 15 N71-27372  
Observation window for a gas confining chamber [NASA-CASE-NPO-10890] c 11 N73-12265  
Combustion detector [NASA-CASE-LAR-10739-1] c 14 N73-16484  
Low gravity phase separator [NASA-CASE-MSC-14773-1] c 35 N78-12390  
Water separator [NASA-CASE-XMS-01295-1] c 37 N79-21345

**GASIFICATION**

Mixed polyvalent-monovalent metal coating for carbon-graphite fibers [NASA-CASE-NPO-14987-1] c 24 N83-33950

**GASKETS**

Cryogenic connector for vacuum use Patent [NASA-CASE-XGS-02441] c 15 N70-41629  
Reinforced polyquinoxaline gasket and method of preparing the same — resistant to ionizing radiation and liquid hydrogen temperatures [NASA-CASE-MFS-21364-1] c 37 N74-18126  
Process for preparing perfluorotriazine elastomers and precursors thereof [NASA-CASE-ARC-11402-1] c 27 N84-22744

**GATES (CIRCUITS)**

Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent [NASA-CASE-XGS-01881] c 09 N70-40123  
SCR blocking pulse gate amplifier Patent [NASA-CASE-XLA-07497] c 09 N71-12514  
Logic AND gate for fluid circuits Patent [NASA-CASE-XLA-07391] c 12 N71-17579  
Synchronous counter Patent [NASA-CASE-XGS-02440] c 08 N71-19432  
Increasing efficiency of switching type regulator circuits Patent [NASA-CASE-XMS-09352] c 09 N71-23316  
Memory device for two-dimensional radiant energy array computers [NASA-CASE-GSC-11839-2] c 60 N78-10709  
Transformer regulated self-stabilizing chopper [NASA-CASE-XGS-09186] c 33 N78-17295  
Controller for computer control of brushless dc motors — automobile engines [NASA-CASE-NPO-13970-1] c 33 N81-20352  
Combinational logic for generating gate drive signals for phase control rectifiers [NASA-CASE-MFS-25208-1] c 33 N83-10345  
Pulsed phase locked loop strain monitor — voltage controlled oscillators [NASA-CASE-LAR-12772-1] c 33 N83-16626  
FET charge sensor and voltage probe [NASA-CASE-NPO-16045-1] c 76 N84-33211

**GATES (OPENINGS)**

Film feed camera having a detent means Patent [NASA-CASE-LAR-10686] c 14 N71-28935

**GAU-1 AIRFOIL**

Airfoil shape for flight at subsonic speeds — design analysis and aerodynamic characteristics of the GAU-1 airfoil [NASA-CASE-LAR-10585-1] c 02 N76-22154

**GEAR TEETH**

Wobble gear drive mechanism — for aerospace environments [NASA-CASE-WOO-00625] c 37 N78-17385  
Belt for transmitting power from a cogged driving member to a cogged driven member [NASA-CASE-GSC-12289-1] c 37 N80-32717

**GEARS**

Precision stepping drive Patent [NASA-CASE-MFS-14772] c 15 N71-17692  
Bidirectional step torque filter with zero backlash characteristic Patent [NASA-CASE-XGS-04227] c 15 N71-21744  
Self-lubricating gears and other mechanical parts Patent [NASA-CASE-MFS-14971] c 15 N71-24984  
Concentric differential gearing arrangement [NASA-CASE-ARC-10462-1] c 37 N74-27901  
Sequencing device utilizing planetary gear set [NASA-CASE-MSC-19514-1] c 37 N79-20377  
Power control for hot gas engines [NASA-CASE-NPO-14220-1] c 37 N81-14318  
Clutchless multiple drive source for output shaft [NASA-CASE-ARC-11325-1] c 37 N82-22496  
Directional gear ratio transmissions [NASA-CASE-LAR-12644-1] c 37 N84-28084

**GELLED ROCKET PROPELLANTS**

Process of forming particles in a cryogenic path Patent [NASA-CASE-NPO-10250] c 23 N71-16212

**GELS**

Intermittent type silica gel adsorption refrigerator Patent [NASA-CASE-XNP-00920] c 15 N71-15906  
Cellular thermosetting fluoropolymers and process for making them [NASA-CASE-GSC-13008-1] c 27 N86-32570

**GENERAL AVIATION AIRCRAFT**

Explosively activated egress area [NASA-CASE-LAR-12624-1] c 01 N83-35992

**GENERATORS**

Apparatus for establishing flow of a fluid mass having a known velocity [NASA-CASE-MFS-21424-1] c 34 N74-27730  
Continuous laminar smoke generator [NASA-CASE-LAR-13014-1] c 09 N85-21178

## GEODESY

Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681

## GEODETIC SURVEYS

Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-1] c 36 N81-22344

## GEODIMETERS

Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-1] c 36 N81-22344

## GEOLOGICAL SURVEYS

Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c 46 N80-10709

Geological assessment probe  
[NASA-CASE-NPO-14558-1] c 46 N80-24906

## GEOMETRY

Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612

## GERMANIUM

Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c 33 N78-13320

## GIMBALS

Gimbaled, partially submerged rocket nozzle Patent  
[NASA-CASE-XMF-01544] c 28 N70-34162

Azimuth laying system Patent  
[NASA-CASE-XMF-01669] c 21 N71-23289

Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694

Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243

Bearing and gimbal lock mechanism and spiral flex lead module Patent  
[NASA-CASE-GSC-10556-1] c 31 N71-26537

Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175

Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047

Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882

## GLANDS (SEALS)

Spiral groove seal  
[NASA-CASE-XLE-10326-2] c 15 N72-29488

Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c 37 N81-26447

## GLASS

Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c 03 N89-24267

Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988

Silicon solar cell with cover glass bonded to cell by metal pattern Patent  
[NASA-CASE-XLE-08569] c 03 N71-23449

Apparatus for applying cover slides  
[NASA-CASE-NPO-10575] c 03 N72-25019

Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063

Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c 44 N76-14600

Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c 74 N77-10899

Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482

Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260

Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442

Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c 31 N83-27058

Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781

Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589

## GLASS COATINGS

Method of attaching a cover glass to a silicon solar cell Patent  
[NASA-CASE-XLE-08569-2] c 03 N71-24681

Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-LEW-10278-1] c 15 N71-28582

Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037

Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879

Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520

High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448

## GLASS ELECTRODES

Liquid junction and method of fabricating the same Patent Application  
[NASA-CASE-NPO-10682] c 15 N70-34699

Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27838

## GLASS FIBER REINFORCED PLASTICS

Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915

Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c 24 N81-29163

## GLASS FIBERS

Non-magnetic battery case Patent  
[NASA-CASE-XGS-00886] c 03 N71-11053

Lathe tool bit and holder for machining fiberglass materials  
[NASA-CASE-XLA-10470] c 15 N72-21489

Polyimide resin-fiberglass cloth laminates for printed circuit boards  
[NASA-CASE-MFS-20408] c 18 N73-12604

Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c 24 N74-30001

Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c 27 N76-15310

Vacuum pressure molding technique  
[NASA-CASE-LAR-10073-1] c 37 N76-24575

Glass compositions with a high modulus of elasticity --- non-toxic glass fibers  
[NASA-CASE-HQN-10274-1] c 27 N82-29451

High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452

Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-3] c 24 N84-16262

Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N86-21684

Containerless high purity pulling process and apparatus for glass fiber  
[NASA-CASE-MFS-25905-2] c 31 N86-21718

## GLASSWARE

Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N84-20808

Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751

## GLAUCOMA

Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c 52 N80-14684

## GLIDE PATHS

Integrated lift/drag controller for aircraft  
[NASA-CASE-ARC-10456-1] c 05 N75-12930

## GLOBAL POSITIONING SYSTEM

Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546

High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1CU] c 04 N86-27270

## GLOBES

Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c 19 N74-21015

## GLOVES

Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080

Restraining mechanism  
[NASA-CASE-MSC-13054] c 54 N78-17677

Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-2] c 54 N84-23113

Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-1] c 54 N84-28484

## GLOW DISCHARGES

Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c 27 N74-13270

Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233

Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c 33 N79-15245

Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401

## GLUCOSE

Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487

## GLYCOLS

Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043

## GOLD COATINGS

Thin window, drifted silicon, charged particle detector  
[NASA-CASE-XLE-10529] c 14 N69-23191

Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205

## GONDOLAS

System for stabilizing torque between a balloon and gondola  
[NASA-CASE-GSC-11077-1] c 02 N73-13008

## GRANULAR MATERIALS

Soil particles separator, collector and viewer Patent  
[NASA-CASE-XNP-09770] c 15 N71-20440

Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597

## GRAPHITE

Bonding graphite with fused silver chloride  
[NASA-CASE-XGS-00963] c 15 N69-39735

Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c 24 N75-28135

Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215

Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103

Mixed polyvalent-monovalent metal coating for carbon-graphite fibers  
[NASA-CASE-NPO-14987-1] c 24 N83-33950

Light weight fire resistant graphite composites  
[NASA-CASE-ARC-11615-1-SB] c 24 N85-28976

Multistage spent particle collector and a method for making same  
[NASA-CASE-LEW-13914-1] c 37 N85-33489

Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267

Light weight fire resistant graphite composites  
[NASA-CASE-ARC-11615-1SB] c 24 N86-28131

## GRAPHITE-EPOXY COMPOSITES

Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c 24 N81-14000

Method and device for detection of a substance --- determining carbon fiber release in fire situations  
[NASA-CASE-NPO-14940-1] c 33 N83-31954

Improved impact tolerant material  
[NASA-CASE-LAR-12887-1] c 24 N84-20649

Method for machining holes in composite materials  
[NASA-CASE-MFS-28044-1] c 31 N86-23750

## GRATINGS (SPECTRA)

Concave grating spectrometer Patent  
[NASA-CASE-XGS-01036] c 14 N70-40003

Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c 74 N80-21140

Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768

## GRAVIMETERS

Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587

## GRAVITATION

Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397

Anti-gravity device  
[NASA-CASE-MFS-22758-1] c 70 N75-26789

## GRAVITATIONAL CONSTANT

Gravity device Patent  
[NASA-CASE-XMF-00424] c 11 N70-38196

## GRAVITATIONAL EFFECTS

Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619

Rotary plant growth accelerating apparatus --- weightlessness  
[NASA-CASE-ARC-10722-1] c 51 N75-25503

Method and apparatus for simulating gravitational forces on a living organism  
[NASA-CASE-MSC-20202-1] c 54 N84-16803

Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629

## GRAVITATIONAL FIELDS

Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537

Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242

## GRAVITY GRADIENT SATELLITES

Stabilization of gravity oriented satellites Patent  
[NASA-CASE-XAC-01591] c 31 N71-17729

Station keeping of a gravity gradient stabilized satellite Patent  
[NASA-CASE-XLA-03132] c 31 N71-22969

## GRAVITY GRADIOMETERS

- Gravity device Patent  
[NASA-CASE-XMF-00424] c 11 N70-38196
- Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324
- GRAZING INCIDENCE**  
Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c 74 N80-21140
- Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459
- GRIDS**  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310
- Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c 37 N76-14461
- Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c 20 N76-21276
- Solar cell grid patterns  
[NASA-CASE-NPO-13087-2] c 44 N76-31666
- GRINDING (MATERIAL REMOVAL)**  
Laser apparatus for removing material from rotating objects Patent  
[NASA-CASE-MFS-11279] c 16 N71-20400
- Method for producing dispersion strengthened alloys by converting metal to a halide, comminuting, reducing the metal halide to the metal and sintering  
[NASA-CASE-LEW-10450-1] c 15 N72-25448
- Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149
- GRINDING MACHINES**  
Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c 37 N74-27905
- GROOVES**  
Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877
- Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c 37 N74-10474
- Spiral groove seal --- for rotating shaft  
[NASA-CASE-XLE-10326-4] c 37 N74-15125
- Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180
- GROUND EFFECT MACHINES**  
Gravity stabilized flying vehicle Patent  
[NASA-CASE-MSC-12111-1] c 02 N71-11039
- Air cushion lift pad Patent  
[NASA-CASE-MFS-14685] c 31 N71-15689
- Open tube guideway for high speed air cushioned vehicles  
[NASA-CASE-LAR-10256-1] c 85 N74-34672
- GROUND HANDLING**  
Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383
- GROUND STATIONS**  
Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287
- Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118
- Ultra stable frequency distribution system  
[NASA-CASE-NPO-13836-1] c 32 N78-15323
- GROUND SUPPORT EQUIPMENT**  
Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391
- Controlled release device Patent  
[NASA-CASE-XKS-03338] c 15 N71-24043
- Apparatus for measuring an aircraft's speed and height  
[NASA-CASE-LAR-12275-1] c 35 N79-18296
- GROUND-AIR-GROUND COMMUNICATION**  
Retrodirective optical system  
[NASA-CASE-XGS-04480] c 16 N69-27491
- Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c 21 N70-41930
- Location identification system  
[NASA-CASE-ERC-10324] c 07 N72-25173
- Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c 32 N80-20448
- GROUT**  
Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043
- GUARDS (SHIELDS)**  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343
- GUIDANCE (MOTION)**  
Gravity stabilized flying vehicle Patent  
[NASA-CASE-MSC-12111-1] c 02 N71-11039
- Adjustable attitude guide device Patent  
[NASA-CASE-XLA-07911] c 15 N71-15571
- Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c 14 N71-28935
- Two component bearing Patent  
[NASA-CASE-XLA-00013] c 15 N71-29136

- Cable stabilizer for open shaft cable operated elevators  
[NASA-CASE-KSC-10513] c 15 N72-25453
- Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288
- GUIDANCE SENSORS**  
Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c 14 N70-34158
- Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621
- Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673
- Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414
- Sun direction detection system  
[NASA-CASE-NPO-13722-1] c 74 N77-22951
- Terminal guidance sensor system  
[NASA-CASE-NPO-14521-1] c 54 N79-20746
- Sun sensing guidance system for high altitude aircraft  
[NASA-CASE-FRC-11052-1] c 04 N82-23231
- Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c 35 N84-33769
- GUN LAUNCHERS**  
Self-obtaining, gas operated launcher  
[NASA-CASE-NPO-11013] c 11 N72-22247
- GUN PROPELLANTS**  
Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c 28 N78-31255
- Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c 09 N79-21084
- GUNN EFFECT**  
Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c 09 N71-18721
- Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701
- Gunn-type solid state devices  
[NASA-CASE-XER-07895] c 26 N72-25679
- Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235
- GUNS**  
Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c 37 N76-18454
- GYNECOLOGY**  
Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875
- GYRATORS**  
Gyrator type circuit Patent  
[NASA-CASE-XAC-10608-1] c 09 N71-12517
- Gyrator employing field effect transistors  
[NASA-CASE-MFS-21433] c 09 N73-20232
- Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c 33 N74-34638
- Integrable power gyrator --- with Z-matrix design using parallel transistors  
[NASA-CASE-MFS-22342-1] c 33 N75-30428
- GYROSCOPES**  
Externally pressurized fluid bearing Patent  
[NASA-CASE-XMF-00515] c 15 N70-34664
- Air bearing Patent  
[NASA-CASE-XMF-00339] c 15 N70-39896
- Spacecraft experiment pointing and attitude control system Patent  
[NASA-CASE-XLA-05464] c 21 N71-14132
- Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position  
[NASA-CASE-NPO-13044-1] c 35 N74-15094
- All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399
- GYROSCOPIC PENDULUMS**  
Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047
- GYROSTABILIZERS**  
Passive dual spin misalignment compensators --- gyro-stabilized device  
[NASA-CASE-GSC-11479-1] c 35 N74-28097
- Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c 15 N76-14158
- Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882
- H**
- HAFNIUM**  
Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584

## HALIDES

- Method for producing dispersion strengthened alloys by converting metal to a halide, comminuting, reducing the metal halide to the metal and sintering  
[NASA-CASE-LEW-10450-1] c 15 N72-25448
- Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c 44 N76-18643
- The 1 - (dialkoxyposphonyl)methyl - 2,4- and -2,6-dinitro- and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-1] c 23 N83-28076
- HALL EFFECT**  
Hall current measuring apparatus having a series resistor for temperature compensation Patent  
[NASA-CASE-XAC-01662] c 14 N71-23037
- Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904
- Hall effect transducer  
[NASA-CASE-LAR-10620-1] c 09 N72-25255
- Redundant speed control for brushless Hall effect motor  
[NASA-CASE-MFS-20207-1] c 09 N73-32107
- Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c 35 N75-13213
- Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569
- HALL GENERATORS**  
Hall current measuring apparatus having a series resistor for temperature compensation Patent  
[NASA-CASE-XAC-01662] c 14 N71-23037
- HALOGENS**  
Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739
- HAMMERS**  
Apparatus for making diamonds  
[NASA-CASE-MFS-20698] c 15 N72-20446
- HAND (ANATOMY)**  
Mechanically actuated triggered hand  
[NASA-CASE-MFS-20413] c 15 N72-21463
- Therapeutic hand exerciser  
[NASA-CASE-LAR-11667-1] c 52 N76-19785
- Compact artificial hand  
[NASA-CASE-NPO-13906-1] c 54 N79-24652
- HANDLING EQUIPMENT**  
Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383
- Device for handling printed circuit cards Patent  
[NASA-CASE-MFS-20453] c 15 N71-29133
- HARDENING (MATERIALS)**  
Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236
- HARDNESS**  
Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153
- HARMONIC GENERATORS**  
Wide band doubler and sine wave quadrature generator  
[NASA-CASE-NPO-11133] c 10 N72-20223
- HARNESSES**  
Pressure suit tie-down mechanism Patent  
[NASA-CASE-XMS-00784] c 05 N71-12335
- One hand backpack harness  
[NASA-CASE-LAR-10102-1] c 05 N72-23085
- Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c 05 N75-25915
- HATCHES**  
Emergency escape system Patent  
[NASA-CASE-MSC-12086-1] c 05 N71-12345
- HEAD-UP DISPLAYS**  
Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733
- HEART FUNCTION**  
Rate meter  
[NASA-CASE-MFS-20418] c 14 N73-24473
- Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c 52 N74-20726
- HEART RATE**  
Digital cardiachometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896
- Rate meter  
[NASA-CASE-MFS-20418] c 14 N73-24473
- Digital computing cardiachometer  
[NASA-CASE-MFS-20284-1] c 52 N74-12778
- Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969
- HEAT**  
Thermionic converter with current augmented by self induced magnetic field Patent  
[NASA-CASE-XLE-01903] c 22 N71-23599
- HEAT EXCHANGERS**  
Electro-thermal rocket Patent  
[NASA-CASE-XLE-00267] c 28 N70-33356

- Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439
- Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10186-1] c 23 N71-24725
- Shell side liquid metal boiler  
[NASA-CASE-NPO-10631] c 33 N72-20915
- Helium refrigerator and method for decontaminating the refrigerator  
[NASA-CASE-NPO-10634] c 23 N72-25619
- Condensate removal device for heat exchanger  
[NASA-CASE-MS-C-14143-1] c 77 N75-20139
- Heat exchanger system and method  
[NASA-CASE-LAR-10799-2] c 34 N76-17317
- Heat transfer device  
[NASA-CASE-MFS-22938-1] c 34 N76-18374
- Heat exchanger  
[NASA-CASE-MFS-22991-1] c 34 N77-10463
- Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c 34 N77-32413
- Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c 25 N79-11151
- Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c 37 N79-11403
- Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c 34 N79-13288
- Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289
- Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c 44 N79-18443
- Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MS-C-16182-1] c 54 N80-10799
- Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c 34 N80-24573
- Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519
- Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N83-31897
- Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-18257-1] c 31 N85-29082
- Monogroove cold plate --- heat-pipe exchanger for space applications  
[NASA-CASE-MS-C-20946-1] c 34 N86-32661
- HEAT FLUX**
- Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459
- Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085
- Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948
- HEAT MEASUREMENT**
- Thermal detector of electromagnetic energy by means of a vibrating electrode Patent  
[NASA-CASE-XAC-10768] c 09 N71-18830
- Specific wavelength colorimeter --- for measuring given solute concentration in test sample  
[NASA-CASE-MS-C-14081-1] c 35 N74-27860
- HEAT OF VAPORIZATION**
- Pumped two-phase heat transfer loop  
[NASA-CASE-MS-C-20841-1] c 34 N86-20721
- HEAT PIPES**
- Heat pipe thermionic diode power system Patent  
[NASA-CASE-XMF-05843] c 03 N71-11055
- Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486
- Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353
- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c 34 N75-12222
- Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515
- Production of I-123  
[NASA-CASE-LEW-11390-3] c 25 N76-29379
- Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c 34 N78-17336
- Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c 34 N78-17337
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523
- High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c 34 N82-11399
- Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596
- Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307
- Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461
- Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568
- High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179
- Multi-leg heat pipe evaporator  
[NASA-CASE-MS-C-20812-1] c 34 N86-27593
- Monogroove cold plate --- heat-pipe exchanger for space applications  
[NASA-CASE-MS-C-20946-1] c 34 N86-32661
- HEAT PUMPS**
- Thermal pump-compressor for space use Patent  
[NASA-CASE-XLA-00377] c 33 N71-17610
- Manually actuated heat pump  
[NASA-CASE-NPO-10677] c 05 N72-11084
- Pump for delivering heated fluids  
[NASA-CASE-NPO-11417] c 15 N73-24513
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c 34 N78-17335
- Cooling system for high speed aircraft  
[NASA-CASE-LAR-12408-1] c 05 N81-26114
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625
- HEAT RADIATORS**
- Capillary radiator Patent  
[NASA-CASE-XLE-03307] c 33 N71-14035
- Radiator deployment actuator Patent  
[NASA-CASE-MS-C-11817-1] c 15 N71-26611
- Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c 14 N71-30026
- HEAT RESISTANT ALLOYS**
- High temperature nickel-base alloy Patent  
[NASA-CASE-XLE-00151] c 17 N70-33283
- Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c 17 N70-36616
- High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-02991] c 17 N71-18025
- Brazing alloy Patent  
[NASA-CASE-XNP-03063] c 17 N71-23365
- Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c 15 N73-13465
- Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c 37 N74-11301
- Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c 37 N74-13179
- Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27180
- Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NPO-13120-1] c 27 N76-15311
- Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c 35 N77-20400
- Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187
- Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279
- Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c 26 N77-32280
- Directionally solidified eutectic gamma-gamma nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c 26 N78-18183
- Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855
- Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N86-26414
- HEAT SHIELDING**
- Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459
- Heat shield oven  
[NASA-CASE-XMS-04318] c 15 N69-27871
- Heat shield Patent  
[NASA-CASE-XMS-00486] c 33 N70-33344
- Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c 33 N70-37979
- Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41631
- Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075
- Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMF-08656] c 06 N71-11242
- Synthesis of polymeric Schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243
- Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c 18 N71-16124
- Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c 33 N71-24145
- Spacecraft Patent  
[NASA-CASE-MS-C-13047-1] c 31 N71-25434
- Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MS-C-12109] c 18 N71-26285
- Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MS-C-12619-2] c 27 N79-12221
- Thermal insulation protection means  
[NASA-CASE-MS-C-12737-1] c 24 N79-25142
- Installing fiber insulation  
[NASA-CASE-MS-C-16873-1] c 37 N81-14317
- Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MS-C-18134-1] c 37 N81-15363
- Multilayer thermal protection system  
[NASA-CASE-LAR-12620-1] c 24 N82-32417
- High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MS-C-18832-1] c 27 N83-18908
- Mechanical fastener  
[NASA-CASE-LAR-12738-2] c 37 N85-30335
- Aerobraking orbital transfer vehicle  
[NASA-CASE-MS-C-20921-1] c 18 N86-20471
- HEAT SINKS**
- Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717
- Constant temperature heat sink for calorimeters Patent  
[NASA-CASE-XMF-04208] c 33 N71-29051
- Tubular sublimator evaporator heat sink  
[NASA-CASE-ARC-10912-1] c 34 N77-19353
- Compact pulsed laser having improved heat conduction  
[NASA-CASE-NPO-13147-1] c 36 N77-25502
- Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168
- Electroexplosive device  
[NASA-CASE-NPO-13858-1] c 28 N79-11231
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523
- Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307
- HEAT SOURCES**
- Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475
- Thermally cascaded thermoelectric generator  
[NASA-CASE-NPO-10753] c 03 N72-26031
- Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876
- Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c 25 N79-10163
- Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MS-C-25707-1] c 35 N85-29214
- HEAT STORAGE**
- Solar energy trap  
[NASA-CASE-MFS-22744-1] c 44 N76-24696
- Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c 44 N76-31667
- Saltless solar pond  
[NASA-CASE-NPO-15808-1] c 44 N84-34792
- Stable density stratification solar pond  
[NASA-CASE-NPO-15419-2] c 44 N85-30474
- HEAT TRANSFER**
- Thermal switch Patent  
[NASA-CASE-XNP-00463] c 33 N70-36847
- Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c 33 N70-37979
- Apparatus for transferring cryogenic liquids Patent  
[NASA-CASE-XLE-00345] c 15 N70-38020
- Method of improving heat transfer characteristics in a nucleate boiling process Patent  
[NASA-CASE-XMS-04268] c 33 N71-16277
- Transmission line thermal short Patent  
[NASA-CASE-XNP-09775] c 09 N71-20445
- Heat sensing instrument Patent  
[NASA-CASE-XLA-01551] c 14 N71-22989
- Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199
- Heat conductive resiliently compressible structure for space electronics package modules Patent  
[NASA-CASE-MS-C-12389] c 33 N71-29052
- Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c 14 N71-30026
- Manually actuated heat pump  
[NASA-CASE-NPO-10677] c 05 N72-11084

High intensity radiant energy pulse source having means for opening shutter when light flux has reached a desired level  
[NASA-CASE-ARC-10178-1] c 09 N72-17152

Apparatus for sensing temperature  
[NASA-CASE-XLE-05230] c 14 N72-27410

Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829

Thermal flux transfer system  
[NASA-CASE-NPO-12070-1] c 28 N73-32606

Electrostatically controlled heat shutter  
[NASA-CASE-NPO-11942-1] c 33 N73-32818

Heat transfer device  
[NASA-CASE-NPO-11120-1] c 34 N74-18552

Heat exchanger  
[NASA-CASE-MFS-22991-1] c 34 N77-10463

Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c 34 N78-17336

Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287

Heat exchanger and method of making  
[NASA-CASE-LEW-12441-3] c 44 N81-24519

Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N82-28368

Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596

Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356

Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307

Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560

Heat pipes to reduce engine exhaust emissions  
[NASA-CASE-LEW-12590-1] c 37 N84-22958

High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179

Monogroove heat pipe design: insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180

Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N86-20721

**HEAT TRANSMISSION**  
Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c 34 N74-27859

Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876

Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c 44 N83-14692

**HEAT TREATMENT**  
High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147

Heat shield oven  
[NASA-CASE-XMS-04318] c 15 N69-27871

Method for molding compounds Patent  
[NASA-CASE-XLA-01091] c 15 N71-10672

Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468

Inorganic thermal control pigment Patent  
[NASA-CASE-XNP-02139] c 18 N71-24184

Thermal compression bonding of interconnectors  
[NASA-CASE-GSC-10303] c 15 N72-22487

Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c 26 N74-10521

Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c 37 N74-21055

Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761

Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236

Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c 45 N76-31714

Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c 26 N78-24333

Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450

Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492

Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N86-26414

Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N86-32570

**HEATERS**  
Inherent redundancy electric heater  
[NASA-CASE-MFS-21462-1] c 33 N74-14935

**HEATING**

System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772

Diffusion welding in air --- solid state welding of butt joint by fusion welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c 37 N74-18128

Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221

Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214

Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389

**HEATING EQUIPMENT**  
Method and apparatus for controllably heating fluid  
Patent  
[NASA-CASE-XMF-04237] c 33 N71-16278

Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816

Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948

Self-cycling fluid heater  
[NASA-CASE-MSC-15567-1] c 33 N73-16918

Portable heatable container  
[NASA-CASE-NPO-14237-1] c 44 N80-20808

Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589

Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286

Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N86-26575

**HEIGHT**  
Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304

**HELICAL ANTENNAS**  
Weatherproof helix antenna Patent  
[NASA-CASE-XKS-08485] c 07 N71-19493

Collapsible high gain antenna  
[NASA-CASE-KSC-10392] c 07 N73-26117

**HELICOPTER WAKES**  
Variable geometry rotor system  
[NASA-CASE-LAR-10557] c 02 N72-11018

**HELICOPTERS**  
Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029

Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c 35 N78-24515

Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c 05 N79-17847

Shapes for rotating airfoils  
[NASA-CASE-LAR-12396-1] c 02 N84-28732

Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400

Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N86-24700

**HELIOSTATS**  
Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520

**HELIUM**  
Helium refining by superfluidity Patent  
[NASA-CASE-XNP-00733] c 06 N70-34946

High pressure helium purifier Patent  
[NASA-CASE-XMF-06888] c 15 N71-24044

Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575

Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229

Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029

Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082

**HELIUM HYDROGEN ATMOSPHERES**  
Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334

**HELIUM IONS**  
Charge transfer reaction laser with preionization means  
[NASA-CASE-NPO-13945-1] c 36 N78-27402

**HELIUM-NEON LASERS**  
Laser communication system for controlling several functions at a location remote to the laser  
[NASA-CASE-LAR-10311-1] c 16 N73-16536

Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c 36 N81-24422

**HELMETS**  
Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190

Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193

Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c 05 N71-26333

Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c 54 N78-17678

Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679

Helmet feedport  
[NASA-CASE-XMS-09653] c 54 N78-17680

Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c 54 N78-18761

Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806

**HELMHOLTZ RESONATORS**  
Acoustic ground impedance meter  
[NASA-CASE-LAR-12995-1] c 35 N84-22933

**HEMISPHERICAL SHELLS**  
Anti-glare improvement for optical imaging systems Patent  
[NASA-CASE-NPO-10337] c 14 N71-15604

**HERMETIC SEALS**  
Line cutter Patent  
[NASA-CASE-XMS-04072] c 15 N70-42017

Hermetically sealed explosive release mechanism Patent  
[NASA-CASE-XGS-00824] c 15 N71-16078

Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c 15 N71-24164

Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910

Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243

Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312

Pressure seal Patent  
[NASA-CASE-NPO-10796] c 15 N71-27068

Tube sealing device Patent  
[NASA-CASE-NPO-10431] c 15 N71-29132

Hermetically sealed elbow actuator  
[NASA-CASE-MFS-14710] c 09 N72-22195

Heat transfer device  
[NASA-CASE-NPO-11120-1] c 34 N74-18552

Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c 35 N77-22450

Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721

Hermetic seal for a shaft  
[NASA-CASE-NPO-15115-1] c 37 N82-24493

Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MSC-20181-1] c 33 N82-28549

Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N86-19610

**HEXAGONS**  
Hexagon solar power panel  
[NASA-CASE-NPO-12148-1] c 44 N78-27515

**HEXAMETHYLENETETRAMINE**  
Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999

**HEXOKINASE**  
Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487

**HIGH ACCELERATION**  
Universal pilot restraint suit and body support therefor Patent  
[NASA-CASE-XAC-00405] c 05 N70-41819

High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272

**HIGH ALTITUDE**  
Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c 05 N69-21473

Sun sensing guidance system for high altitude aircraft  
[NASA-CASE-FRC-11052-1] c 04 N82-23231

**HIGH ALTITUDE BALLOONS**  
Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015

Thin film strain transducer --- suitable for in-flight measurement of scientific balloon strain  
[NASA-CASE-WLP-10055-2] c 35 N85-21598

**HIGH ALTITUDE ENVIRONMENTS**  
Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779



## HIGH ASPECT RATIO

- Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c 02 N70-33286  
Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34658  
Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279

## HIGH FREQUENCIES

- Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c 09 N69-24318  
Holder for crystal resonators Patent  
[NASA-CASE-XNP-03637] c 15 N71-21311  
Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c 10 N71-26414  
Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c 08 N79-23097  
Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c 35 N84-22929  
JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515

## HIGH GAIN

- Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c 08 N79-23097

## HIGH PASS FILTERS

- Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c 09 N71-23573

## HIGH POLYMERS

- Variable stiffness polymeric damper  
[NASA-CASE-XAC-11225] c 14 N69-27486

## HIGH POWER LASERS

- Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415  
Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418  
High power metallic halide laser --- amplifying a copper chloride laser  
[NASA-CASE-NPO-14782-1] c 36 N82-26616  
Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542  
Magnetically switched power supply systems for lasers  
[NASA-CASE-NPO-18402-1] c 36 N85-29265  
Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-1SB] c 25 N86-32540  
Pretreatment and reactivation of an oxide-containing catalyst  
[NASA-CASE-LAR-13540-1SB] c 25 N86-32541

## HIGH PRESSURE

- High-temperature, high-pressure spherical segment valve Patent  
[NASA-CASE-XAC-00074] c 15 N70-34817  
High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c 15 N70-36908  
High pressure filter Patent  
[NASA-CASE-XNP-00732] c 28 N70-41447  
Antiflutter ball check valve Patent  
[NASA-CASE-XNP-01152] c 15 N70-41811  
Liquid flow sight assembly Patent  
[NASA-CASE-XLE-02998] c 14 N70-42074  
High pressure regulator valve Patent  
[NASA-CASE-XNP-00710] c 15 N71-10778  
Hypersonic test facility Patent  
[NASA-CASE-XLA-00378] c 11 N71-15925  
High pressure air valve Patent  
[NASA-CASE-MS-11010] c 15 N71-19485  
Valve seat with resilient support member Patent  
[NASA-CASE-XKS-02582] c 15 N71-21234  
High pressure helium purifier Patent  
[NASA-CASE-XMF-06888] c 15 N71-24044  
Liquid aerosol dispenser  
[NASA-CASE-MFS-20829] c 12 N72-21310  
Gas compression apparatus  
[NASA-CASE-MS-14757-1] c 35 N78-10428  
Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238  
Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c 37 N79-22475  
Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MS-18422-1] c 37 N82-16408  
High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N84-16986  
Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788  
Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1CU] c 35 N86-32700

## HIGH RESOLUTION

- High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119  
High resolution Fourier interferometer-spectrophotopolarimeter  
[NASA-CASE-NPO-13604-1] c 35 N76-31490

High resolution threshold photoelectron spectroscopy by electron attachment

- [NASA-CASE-NPO-14078-1] c 72 N80-14877  
Interferometer --- high resolution  
[NASA-CASE-NPO-14448-1] c 74 N81-29963  
High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898  
Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705

## HIGH SPEED

- Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c 05 N69-21473  
High speed low level electrical stepping switch Patent  
[NASA-CASE-XAC-00060] c 09 N70-39915  
Impact testing machine Patent  
[NASA-CASE-XNP-04817] c 14 N71-23225  
Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24692  
High speed rolling element bearing  
[NASA-CASE-LEW-10856-1] c 15 N72-22490  
Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c 75 N76-14931  
Selective data segment monitoring system --- using shift registers  
[NASA-CASE-ARC-10899-1] c 60 N77-19760  
Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c 37 N79-22475  
High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898

## HIGH SPEED CAMERAS

- Electrically-operated rotary shutter Patent  
[NASA-CASE-XNP-00837] c 14 N70-40273

## HIGH STRENGTH

- Method of making fiber composites  
[NASA-CASE-LEW-10424-2-2] c 18 N72-25539  
High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25438

## HIGH STRENGTH ALLOYS

- High temperature cobalt-base alloy Patent  
[NASA-CASE-XLE-00726] c 17 N71-15644  
Low temperature aluminum alloy Patent  
[NASA-CASE-XMF-02786] c 17 N71-20743  
Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride Patent  
[NASA-CASE-XLE-03940] c 18 N71-26153  
Nickel base alloy  
[NASA-CASE-LEW-10874-1] c 17 N72-22535  
Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484

## HIGH STRENGTH STEELS

- Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c 24 N76-14203  
Process for making a high toughness-high strength ion alloy  
[NASA-CASE-LEW-12542-2] c 26 N79-22271

## HIGH TEMPERATURE

- High temperature heat source Patent  
[NASA-CASE-XLE-00490] c 33 N70-34545  
Thermionic diode switch Patent  
[NASA-CASE-NPO-10404] c 03 N71-12255  
Hypersonic test facility Patent  
[NASA-CASE-XLA-00378] c 11 N71-15925  
Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088  
Induction furnace with perforated tungsten foil shielding Patent  
[NASA-CASE-XLE-04026] c 14 N71-23267  
Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312  
Method of making fiber composites  
[NASA-CASE-LEW-10424-2-2] c 18 N72-25539  
Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c 15 N73-13465  
High temperature beryllium oxide capacitor  
[NASA-CASE-LEW-11938-1] c 33 N76-15373  
Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c 44 N77-32581  
Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346  
High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c 34 N82-11399  
High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N84-16986  
Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555

Chemical approach for controlling nadimide cure temperature and rate

- [NASA-CASE-LEW-13770-5] c 27 N85-21352  
Multistage spent particle collector and a method for making same  
[NASA-CASE-LEW-13914-1] c 37 N85-33489  
Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721  
Thermal-stress-free fasteners  
[NASA-CASE-LAR-13325-1-SB] c 37 N86-20805  
Flexible diaphragm: Extreme temperature usage  
[NASA-CASE-MS-20797-1] c 37 N86-20806

## HIGH TEMPERATURE AIR

- Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c 12 N73-28144

## HIGH TEMPERATURE ENVIRONMENTS

- High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147  
Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c 17 N70-36616  
Strain sensor for high temperatures Patent  
[NASA-CASE-XNP-09205] c 14 N71-17657  
Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c 33 N76-21390  
Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c 31 N76-31365  
Installing fiber insulation  
[NASA-CASE-MS-16973-1] c 37 N81-14317  
Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188  
High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MS-18526-1] c 37 N82-24494  
Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13266-1] c 27 N82-29453  
Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568  
Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233

## HIGH TEMPERATURE FLUIDS

- Self-cycling fluid heater  
[NASA-CASE-MS-15567-1] c 33 N73-16918  
High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature  
[NASA-CASE-LAR-12375-1] c 32 N78-24203

## HIGH TEMPERATURE GASES

- Instrument for the quantitative measurement of radiation at multiple wave lengths Patent  
[NASA-CASE-XLE-00011] c 14 N70-41946  
Ablative resin Patent  
[NASA-CASE-XLE-05913] c 33 N71-14032  
Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641  
Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c 12 N73-25262  
Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477  
Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c 28 N80-10374  
Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370  
Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144

## HIGH TEMPERATURE LUBRICANTS

- Method of making self lubricating fluoride-metal composite materials Patent  
[NASA-CASE-XLE-08511-2] c 18 N71-16105  
Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710  
Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916

## HIGH TEMPERATURE PLASMAS

- Method and apparatus for producing a plasma Patent  
[NASA-CASE-XLA-00147] c 25 N70-34661

## HIGH TEMPERATURE PROPELLANTS

- Feed system for an ion thruster  
[NASA-CASE-NPO-10737] c 28 N72-11709

## HIGH TEMPERATURE RESEARCH

- Gas cooled high temperature thermocouple Patent  
[NASA-CASE-XLE-09475-1] c 33 N71-15568  
Light shield and infrared reflector for fatigue testing Patent  
[NASA-CASE-XLA-01782] c 14 N71-26136



High temperature oxidation resistant cermet compositions [NASA-CASE-NPO-13666-1] c 27 N77-13217

**HIGH TEMPERATURE TESTS**

High-temperature, high-pressure spherical segment valve Patent [NASA-CASE-XAC-00074] c 15 N70-34817

High temperature testing apparatus Patent [NASA-CASE-XLE-00335] c 14 N70-35368

Apparatus for positioning and loading a test specimen Patent [NASA-CASE-XLE-01300] c 15 N70-41993

Containerless high temperature calorimeter apparatus [NASA-CASE-MFS-23923-1] c 35 N81-19426

Heating and cooling system --- for fatigue test specimens [NASA-CASE-LAR-12393-1] c 34 N83-34221

**HIGH VACUUM**

Sealing device for an electrochemical cell Patent [NASA-CASE-XGS-02630] c 03 N71-22974

Vacuum evaporator with electromagnetic ion steering Patent [NASA-CASE-NPO-10331] c 09 N71-26701

Apparatus for absolute pressure measurement [NASA-CASE-LAR-10000] c 14 N73-30394

Plasma cleaning device --- designed for high vacuum environments [NASA-CASE-MFS-22906-1] c 75 N78-27913

**HIGH VACUUM ORBITAL SIMULATOR**

Space environmental work simulator Patent [NASA-CASE-XMF-07488] c 11 N71-18773

**HIGH VOLTAGES**

Electrode and insulator with shielded dielectric junction [NASA-CASE-XLE-03778] c 09 N69-21542

High-voltage cable Patent [NASA-CASE-XNP-00738] c 09 N70-38201

High voltage pulse generator Patent [NASA-CASE-MSC-12178-1] c 09 N71-13518

High voltage transistor circuit Patent [NASA-CASE-XNP-06937] c 09 N71-19516

High voltage divider system Patent [NASA-CASE-XLE-02008] c 09 N71-21583

High voltage distributor [NASA-CASE-GSC-11849-1] c 33 N76-16332

Sustained arc ignition system [NASA-CASE-LEW-12444-1] c 33 N77-28385

High voltage planar multijunction solar cell [NASA-CASE-LEW-13400-1] c 44 N82-31764

Electronic system for high power load control --- solar arrays [NASA-CASE-NPO-15358-1] c 33 N83-27126

High voltage v-groove solar cell [NASA-CASE-LEW-13401-2] c 44 N83-32177

High voltage isolation transformer [NASA-CASE-GSC-12817-1] c 33 N85-29146

High voltage power supply [NASA-CASE-GSC-12818-1] c 33 N85-29147

**HIGHWAYS**

Traffic survey system --- using optical scanners [NASA-CASE-MFS-22631-1] c 66 N76-19888

**HINGES**

Foldable beam [NASA-CASE-LAR-12077-1] c 31 N81-25259

Joint for deployable structures [NASA-CASE-NPO-16038-1] c 37 N86-19605

**HISTOGRAMS**

Data compression system [NASA-CASE-XNP-09785] c 08 N69-21928

**HOLDERS**

Water cooled contactor for anode in carbon arc mechanism [NASA-CASE-XMS-03700] c 15 N69-24266

Quick disconnect latch and handle combination Patent [NASA-CASE-MFS-11132] c 15 N71-17649

Holder for crystal resonators Patent [NASA-CASE-XNP-03637] c 15 N71-21311

Adjustable force probe [NASA-CASE-MFS-20760] c 14 N72-33377

Fifth wheel [NASA-CASE-FRC-10081-1] c 37 N77-14477

Combined docking and grasping device [NASA-CASE-MFS-23088-1] c 37 N77-23483

Plural output optometric sample cell and analysis system [NASA-CASE-NPO-10233-1] c 74 N76-33913

Method and apparatus for holding two separate metal pieces together for welding [NASA-CASE-GSC-12318-1] c 37 N80-23655

Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching [NASA-CASE-NPO-15227-1] c 37 N81-33482

Scriber for silicon wafers [NASA-CASE-NPO-15539-1] c 37 N82-11469

Liquid immersion apparatus for minute articles [NASA-CASE-MFS-25363-1] c 37 N82-12441

Spray coating apparatus having a rotatable workpiece holder [NASA-CASE-ARC-11110-1] c 37 N82-24492

Compression test apparatus [NASA-CASE-MSC-18723-1] c 35 N83-21312

Apparatus and method for inspecting a bearing ball --- eddy current inspection technique [NASA-CASE-MFS-25833-1] c 35 N83-21316

Holding fixture for a hot stamping press [NASA-CASE-GSC-12619-1] c 37 N84-12491

Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter [NASA-CASE-LAR-12881-1] c 27 N84-14323

Method and apparatus for gripping uniaxial fibrous composite materials [NASA-CASE-LEW-13758-1] c 24 N84-27829

Apparatus for mounting a field emission cathode [NASA-CASE-LEW-14108-1] c 33 N85-29149

Laboratory glassware rack for seismic safety [NASA-CASE-ARC-11422-1] c 35 N86-20751

Apparatus and method for inspecting a bearing ball [NASA-CASE-MFS-25833-1] c 35 N86-32698

**HOLE DISTRIBUTION (MECHANICS)**

Thermocouple installation [NASA-CASE-NPO-13540-1] c 35 N77-14409

**HOLE MOBILITY**

Depositing semiconductor films utilizing a thermal gradient [NASA-CASE-XKS-04614] c 15 N69-21460

**HOLLOW**

Dual membrane hollow fiber fuel cell and method of operating same [NASA-CASE-NPO-13732-1] c 44 N79-10513

**HOLLOW CATHODES**

Hydrogen hollow cathode ion source [NASA-CASE-LEW-12940-1] c 72 N80-33186

Hollow cathode apparatus [NASA-CASE-NPO-15560-1] c 33 N85-21491

**HOLOGRAPHIC INTERFEROMETRY**

Interferometric angle monitor [NASA-CASE-GSC-12614-1] c 74 N83-32577

Method of and apparatus for double-exposure holographic interferometry [NASA-CASE-MFS-25405-1] c 35 N84-22929

**HOLOGRAPHY**

Focused image holography with extended sources Patent [NASA-CASE-ERC-10019] c 16 N71-15551

Hybrid holographic system using reflected and transmitted object beams simultaneously Patent [NASA-CASE-MFS-20074] c 16 N71-15565

Recording and reconstructing focused image holograms Patent [NASA-CASE-ERC-10017] c 16 N71-15567

Method and means for recording and reconstructing holograms without use of a reference beam Patent [NASA-CASE-ERC-10020] c 16 N71-26154

Multiple image storing system for high speed projectile holography [NASA-CASE-MFS-20596] c 14 N72-17324

Holographic thin film analyzer [NASA-CASE-MFS-20823-1] c 16 N73-30476

Method and apparatus for checking the stability of a setup for making reflection type holograms [NASA-CASE-MFS-21455-1] c 35 N74-15146

Real time moving scene holographic camera system [NASA-CASE-MFS-21087-1] c 35 N74-17153

Holography utilizing surface plasmon resonances [NASA-CASE-MFS-22040-1] c 35 N74-26946

Holographic system for nondestructive testing [NASA-CASE-MFS-21704-1] c 35 N75-25124

Real time, large volume, moving scene holographic camera system [NASA-CASE-MFS-22537-1] c 35 N75-27328

Holographic motion picture camera with Doppler shift compensation [NASA-CASE-MFS-22517-1] c 35 N76-18402

Optical process for producing classification maps from multispectral data [NASA-CASE-MSC-14472-1] c 43 N77-10584

**HOMING DEVICES**

Location identification system [NASA-CASE-ERC-10324] c 07 N72-25173

**HONEYCOMB CORES**

Method of making inflatable honeycomb Patent [NASA-CASE-XLA-03492] c 15 N71-22713

Method of forming shapes from planar sheets of thermosetting materials [NASA-CASE-NPO-11036] c 15 N72-24522

Honeycomb core structures of minimal surface tubule sections [NASA-CASE-ERC-10363] c 18 N72-25541

**HONEYCOMB STRUCTURES**

Method for making a heat insulating and ablative structure [NASA-CASE-XMS-01108] c 15 N69-24322

Inflatable honeycomb Patent [NASA-CASE-XLA-00204] c 32 N70-36536

Fluid flow control valve Patent [NASA-CASE-XLE-00703] c 15 N71-15967

Method and apparatus for making a heat insulating and ablative structure Patent [NASA-CASE-XMS-02009] c 33 N71-20834

Honeycomb panel and method of making same Patent [NASA-CASE-XMF-01402] c 18 N71-21651

Cryogenic thermal insulation Patent [NASA-CASE-XMF-05046] c 33 N71-28892

Honeycomb panels formed of minimal surface periodic tubule layers [NASA-CASE-ERC-10364] c 18 N72-25540

Bonding or repairing process [NASA-CASE-MSC-12357] c 15 N73-12489

Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material [NASA-CASE-MFS-21485-1] c 37 N74-25968

Vacuum pressure molding technique [NASA-CASE-LAR-10073-1] c 37 N76-24575

Honeycomb-laminate composite structure [NASA-CASE-ARC-10913-1] c 24 N78-15180

Method of making a composite sandwich lattice structure [NASA-CASE-LAR-11898-2] c 24 N78-17149

Low density bismaleimide-carbon microballoon composites [NASA-CASE-ARC-11040-1] c 24 N79-16915

**HOOP COLUMN ANTENNAS**

Latching mechanism for deployable/re-stowable columns useful in satellite construction [NASA-CASE-LAR-13169-1] c 37 N86-25791

**HORIZON SCANNERS**

Electromagnetic mirror drive system [NASA-CASE-XLA-03724] c 14 N69-27461

Multi-lobar scan horizon sensor Patent [NASA-CASE-XGS-00809] c 21 N70-35427

Attitude orientation of spin-stabilized space vehicles Patent [NASA-CASE-XLA-00281] c 21 N70-36943

Amplifier clamping circuit for horizon scanner Patent [NASA-CASE-XGS-01784] c 10 N71-20782

Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent [NASA-CASE-XNP-06957] c 14 N71-21088

Infrared horizon locator [NASA-CASE-LAR-10726-1] c 14 N73-20475

**HORIZONTAL SPACECRAFT LANDING**

Variable-geometry winged reentry vehicle Patent [NASA-CASE-XLA-00241] c 31 N70-37986

**HORIZONTAL TAIL SURFACES**

Translating horizontal tail Patent [NASA-CASE-XLA-08801-1] c 02 N71-11043

**HORN ANTENNAS**

Antenna beam-shaping apparatus Patent [NASA-CASE-XNP-00611] c 09 N70-35219

Parabolic reflector horn feed with spillover correction Patent [NASA-CASE-XNP-00540] c 09 N70-35382

Horn feed having overlapping apertures Patent [NASA-CASE-GSC-10452] c 07 N71-12396

Dual mode horn antenna Patent [NASA-CASE-XNP-01057] c 07 N71-15907

Multi-purpose antenna employing dish reflector with plural coaxial horn feeds [NASA-CASE-NPO-11264] c 07 N72-25174

Horn antenna having V-shaped corrugated slots [NASA-CASE-LAR-11112-1] c 32 N76-15330

Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector [NASA-CASE-NPO-13568-1] c 32 N76-21365

Reflex feed system for dual frequency antenna with frequency cutoff means [NASA-CASE-NPO-14022-1] c 32 N78-31321

Dual band combiner for horn antenna [NASA-CASE-NPO-14519-1] c 32 N80-23524

Collapsible corrugated horn antenna [NASA-CASE-LAR-11745-1] c 32 N80-29539

Multifrequency broadband polarized horn antenna [NASA-CASE-NPO-14588-1] c 32 N81-25278

**HOSES**

Self-contained, single-use hose and tubing cleaning module [NASA-CASE-MSC-20857-1] c 37 N86-20807

**HOT CATHODES**

Ion thruster cathode [NASA-CASE-XLE-07087] c 06 N69-39889

**HOT PRESSING**

Method of making a cermet Patent [NASA-CASE-LEW-10219-1] c 18 N71-28729

Holding fixture for a hot stamping press [NASA-CASE-GSC-12619-1] c 37 N84-12491

## HOT WORKING

Method for forming plastic materials Patent  
[NASA-CASE-XMS-05518] c 15 N71-17803

## HOT-WIRE ANEMOMETERS

Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c 35 N77-20400  
Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c 35 N77-24454

## HOT-WIRE FLOWMETERS

Hot wire liquid level detector for cryogenic fluids Patent  
[NASA-CASE-XLE-00454] c 23 N71-17802  
Flow separation detector  
[NASA-CASE-ARC-11046-1] c 35 N78-14364  
Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470

## HOUSINGS

Sealed cabinetry Patent  
[NASA-CASE-MS-C-12168-1] c 09 N71-18600  
Open type urine receptacle  
[NASA-CASE-MS-C-12324-1] c 05 N72-22093  
Universal environment package with sectional component housing  
[NASA-CASE-KSC-10031] c 15 N72-22486  
Gas flow control device  
[NASA-CASE-NPO-11479] c 15 N73-13482  
Cryogenic gyroscope housing --- with annular disks for gas spin-up  
[NASA-CASE-MFS-21136-1] c 35 N74-18323  
Heat transfer device  
[NASA-CASE-NPO-11120-1] c 34 N74-18552  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500  
Preloadable vector sensitive latch  
[NASA-CASE-MS-C-20910-1] c 37 N86-19613

## HOVERING

Gravity stabilized flying vehicle Patent  
[NASA-CASE-MS-C-12111-1] c 02 N71-11039

## HUBBLE SPACE TELESCOPE

System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865

## HUBS

Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336

## HUGENIOT EQUATION OF STATE

Determining particle density using known material Hugoniot curves  
[NASA-CASE-LAR-11059-1] c 76 N75-12810

## HULLS (STRUCTURES)

Hydrofoil Patent  
[NASA-CASE-XLA-00229] c 12 N70-33305

## HUMAN BEINGS

Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067

## HUMAN BODY

Mass measuring system Patent  
[NASA-CASE-XMS-03371] c 05 N70-42000  
Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189  
Garments for controlling the temperature of the body Patent  
[NASA-CASE-XMS-10269] c 05 N71-24147  
Tilting table for ergometer and for other biomedical devices  
[NASA-CASE-MFS-21010-1] c 05 N73-30078  
Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MS-C-14276-1] c 52 N77-14737

## HUMAN FACTORS ENGINEERING

Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152  
Harness assembly Patent  
[NASA-CASE-MFS-14671] c 05 N71-12341  
Multiple circuit switch apparatus with improved pivot actuator structure Patent  
[NASA-CASE-XAC-03777] c 10 N71-15809  
Three-axis finger tip controller for switches Patent  
[NASA-CASE-XAC-02405] c 09 N71-16089  
Extravehicular tunnel suit system Patent  
[NASA-CASE-MS-C-12243-1] c 05 N71-24728  
EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MS-C-13282-1] c 05 N71-24729  
Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736  
Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836

Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661  
Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MS-C-18381-1] c 52 N81-28740  
Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-18059  
Thermal garment  
[NASA-CASE-XMS-03694-1] c 54 N82-29002  
Kinesimetric method and apparatus  
[NASA-CASE-MS-C-18929-1] c 39 N83-20280  
Shoulder and hip joint for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N84-33021  
Shoulder and hip joint for hard space suits and the like  
[NASA-CASE-ARC-11543-1] c 54 N85-21986  
Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N85-21987  
Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618  
Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620

## HUMAN PERFORMANCE

Color perception tester  
[NASA-CASE-KSC-10278] c 05 N72-16015

## HUMAN REACTIONS

Reaction tester  
[NASA-CASE-MS-C-13604-1] c 05 N73-13114

## HUMAN WASTES

Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c 54 N74-20725  
Automatic bio waste sampling  
[NASA-CASE-MS-C-14640-1] c 54 N76-14804  
Absorbent product to absorb fluids --- for collection of human wastes  
[NASA-CASE-MS-C-18223-1] c 24 N82-29362  
Absorbent product and articles made therefrom  
[NASA-CASE-MS-C-18223-2] c 54 N84-11758

## HUMIDITY

Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559  
Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
[NASA-CASE-GSC-12191-1] c 31 N80-32583

## HUMIDITY MEASUREMENT

A water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N86-20755

## HYBRID CIRCUITS

Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MS-C-20181-1] c 33 N82-28549  
Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590  
Hybrid power semiconductor  
[NASA-CASE-LEW-13922-1] c 33 N86-20672

## HYBRID COMPUTERS

Adaptive voting computer system  
[NASA-CASE-MS-C-13932-1] c 62 N74-14920

## HYBRID PROPELLANTS

Solid propellant liner Patent  
[NASA-CASE-XNP-09744] c 27 N71-16392

## HYDRAULIC CONTROL

Shear modulated fluid amplifier Patent  
[NASA-CASE-MFS-10412] c 12 N71-17578  
Multiple orifice throttle valve Patent  
[NASA-CASE-XNP-09898] c 15 N71-18580  
Fluidic-thermochromic display device Patent  
[NASA-CASE-ERC-10031] c 12 N71-18603  
Hydraulic transformer Patent  
[NASA-CASE-MFS-20830] c 15 N71-30028  
Hydraulic drain means for servo-systems  
[NASA-CASE-NPO-10316-1] c 37 N77-22479

## HYDRAULIC EQUIPMENT

Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677  
Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604  
Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658  
Anti-backlash circuit for hydraulic drive system Patent  
[NASA-CASE-XNP-01020] c 03 N71-12260  
Hydraulic grip Patent  
[NASA-CASE-XLA-05100] c 15 N71-17696  
Shock absorber Patent  
[NASA-CASE-XMS-03722] c 15 N71-21530  
Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975  
Energy limiter for hydraulic actuators Patent  
[NASA-CASE-ARC-10131-1] c 15 N71-27754  
Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
[NASA-CASE-XAC-00048] c 02 N71-29128  
Hydraulic transformer Patent  
[NASA-CASE-MFS-20830] c 15 N71-30028

Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c 03 N72-25021  
Geysering inhibitor for vertical cryogenic transfer pipe  
[NASA-CASE-KSC-10615] c 15 N73-12486  
Redundant hydraulic control system for actuators  
[NASA-CASE-MFS-20944] c 15 N73-13466  
Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c 37 N75-15050  
Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185  
Filter regeneration systems --- a system for regenerating a system filter in a fluid flow line  
[NASA-CASE-MS-C-14273-1] c 34 N75-33342  
Quick disconnect filter coupling  
[NASA-CASE-MFS-22323-1] c 37 N76-14463  
Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 43 N81-26509  
Gas-to-hydraulic power converter  
[NASA-CASE-KSC-18794-1] c 44 N83-14693  
Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085  
Personnel emergency carrier vehicle  
[NASA-CASE-KSC-11282-1] c 85 N86-22452  
Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N86-32770

## HYDRAULIC FLUIDS

Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790

## HYDRAULIC JETS

Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N84-32398

## HYDRAZINE ENGINES

Reciprocating engines  
[NASA-CASE-MS-C-16239-1] c 37 N81-32510

## HYDRAZINE NITROFORM

Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c 27 N73-16764

## HYDRAZINES

Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00878] c 28 N70-41311  
Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c 18 N71-15688  
Prevention of hydrogen embrittlement of high strength steel by hydrazine compositions --- by adding potassium hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c 24 N76-14203

## HYDRIDES

Ten degree Kelvin hydride refrigerator  
[NASA-CASE-NPO-16393-1-CU] c 31 N85-29084

## HYDROCARBON COMBUSTION

In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452

## HYDROCARBON FUEL PRODUCTION

Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261

## HYDROCARBON FUELS

Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c 15 N70-33382  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c 44 N76-29704

## HYDROCARBONS

Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c 27 N73-16764  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446  
Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497  
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514  
Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547

## HYDROCHLORIC ACID

Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742

## HYDROCHLORIDES

Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680

## HYDRODYNAMICS

Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490

## HYDROFOILS

Hydrofoil Patent  
[NASA-CASE-XLA-00229] c 12 N70-33305

## HYDROFORMING

Hydroforming techniques using epoxy molds Patent  
[NASA-CASE-XLE-05641-1] c 15 N71-26346

## HYDROGEN

Method for detecting hydrogen gas  
[NASA-CASE-XMF-03873] c 06 N69-39733

Prevention of pressure build-up in electrochemical cells  
Patent  
[NASA-CASE-XGS-01419] c 03 N70-41864

Pulse activated polarographic hydrogen detector  
Patent  
[NASA-CASE-XMF-06531] c 14 N71-17575

Hydrogen leak detection device Patent  
[NASA-CASE-MFS-11537] c 14 N71-20442

Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c 06 N72-25146

Hydrogen fire blink detector  
[NASA-CASE-MFS-15063] c 14 N72-25412

Process for separation of dissolved hydrogen from water  
by use of palladium and process for coating palladium  
with palladium black  
[NASA-CASE-MSC-13335-1] c 06 N72-31140

Atomic hydrogen maser with bulb temperature control  
to remove wall shift in maser output frequency  
[NASA-CASE-HQN-10654-1] c 16 N73-13489

Method of producing a storage bulb for an atomic  
hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029

Atomic standard with variable storage volume  
[NASA-CASE-GSC-11895-1] c 35 N76-15436

Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446

Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c 44 N76-18641

Hydrogen-rich gas generator  
[NASA-CASE-NPO-13464-1] c 44 N76-18642

Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c 44 N77-22607

Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c 44 N77-32580

Method and automated apparatus for detecting coliform  
organisms  
[NASA-CASE-MSC-16777-1] c 51 N80-27067

Method of cross-linking polyvinyl alcohol and other water  
soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516

Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253

**HYDROGEN ATOMS**  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c 28 N78-24365

Atomic hydrogen storage --- cryotrapping and magnetic  
field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402

Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103

**HYDROGEN EMBRITTLEMENT**  
Prevention of hydrogen embrittlement of high strength  
steel by hydrazine compositions --- by adding potassium  
hydroxide to hydrazine  
[NASA-CASE-NPO-12122-1] c 24 N76-14203

**HYDROGEN ENGINES**  
Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526

**HYDROGEN FUELS**  
Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-2] c 44 N76-29700

Hydrogen rich gas generator  
[NASA-CASE-NPO-13464-2] c 44 N76-29704

Hydrogen-rich gas generator  
[NASA-CASE-NPO-13560-1] c 44 N77-10636

**HYDROGEN IONS**  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c 72 N80-33186

**HYDROGEN OXYGEN FUEL CELLS**  
Electrolytically regenerative hydrogen-oxygen fuel cell  
Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052

Passively regulated water electrolysis rocket engine  
Patent  
[NASA-CASE-XGS-08729] c 28 N71-14044

**HYDROGEN PEROXIDE**  
Decomposition unit Patent  
[NASA-CASE-XMS-00583] c 28 N70-38504

**HYDROGEN PRODUCTION**  
Start up system for hydrogen generator used with an  
internal combustion engine  
[NASA-CASE-NPO-13849-1] c 28 N80-10374

Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N82-28368

Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N86-23744

## HYDROGENATION

Production of high purity silicon carbide Patent  
[NASA-CASE-XLA-00158] c 26 N70-36805

Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c 35 N74-15127

Fire resistant polymers based on 1-(diorgano  
oxyphosphonyl)methyl-2,4- and 2,6-diamino benzenes  
[NASA-CASE-ARC-11512-2] c 27 N85-21362

## HYDROLOGY

Radar target for remotely sensing hydrological  
phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498

## HYDROLYSIS

Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743

## HYDROSTATIC PRESSURE

Method and apparatus for simulating gravitational forces  
on a living organism  
[NASA-CASE-MSC-20202-1] c 54 N84-16803

## HYDROSTATICS

Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c 37 N77-28486

## HYDROXIDES

Method for determining presence of OH in magnesium  
oxide  
[NASA-CASE-NPO-10774] c 06 N72-17095

Separator for alkaline electric batteries and method of  
making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644

Synthesis of dawsonites --- for use in fire extinguishing  
operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977

## HYDROXYL COMPOUNDS

Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174

## HYGIENE

Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MSC-18381-1] c 52 N81-28740

## HYGROMETERS

Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c 35 N78-25391

Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212

## HYGROSCOPICITY

Method of evaluating moisture barrier properties of  
encapsulating materials Patent  
[NASA-CASE-NPO-10051] c 18 N71-24934

## HYPERFINE STRUCTURE

Process for producing dispersion strengthened nickel  
with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142

## HYPERGOLIC ROCKET PROPELLANTS

Apparatus for igniting solid propellants Patent  
[NASA-CASE-XLE-00207] c 28 N70-33375

Small rocket engine Patent  
[NASA-CASE-XLE-00685] c 28 N70-41992

Method of igniting solid propellants Patent  
[NASA-CASE-XLE-01988] c 27 N71-15634

## HYPERSONIC AIRCRAFT

Multi-stage aerospace craft --- perspective drawings of  
conceptual design  
[NASA-CASE-XMF-02263] c 05 N74-10907

## HYPERSONIC FLIGHT

Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168

## HYPERSONIC FLOW

Hypersonic test facility Patent  
[NASA-CASE-XLA-05378] c 11 N71-21475

## HYPERSONIC SPEED

Reentry vehicle leading edge Patent  
[NASA-CASE-XLA-00165] c 31 N70-33242

Landing arrangement for aerospace vehicle Patent  
[NASA-CASE-XLA-00805] c 31 N70-38010

Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c 31 N71-15674

High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088

Apparatus and method for generating large mass flow  
of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c 12 N73-25262

Apparatus and method for generating large mass flow  
of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10612-1] c 12 N73-28144

## HYPERSONIC VEHICLES

Techniques for insulating cryogenic fuel containers  
Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015

## HYPERSONIC WIND TUNNELS

Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235

## HYPERTHERMIA

Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996

## HYPERVELOCITY GUNS

Dust particle injector for hypervelocity accelerators  
Patent  
[NASA-CASE-XGS-06628] c 24 N71-16213

Hypervelocity gun Patent  
[NASA-CASE-XAC-05902] c 11 N71-18578

Collapsible pistons  
[NASA-CASE-MSC-13789-1] c 11 N73-32152

Hypervelocity gun --- using both electric and chemical  
energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c 09 N79-21084

## HYPERVELOCITY IMPACT

Method of and device for determining the characteristics  
and flux distribution of micrometeorites --- scanning  
puncture holes in sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c 91 N74-13130

## HYPERVELOCITY PROJECTILES

Impact measuring technique  
[NASA-CASE-LAR-10913] c 14 N72-16282

Multiple image storing system for high speed projectile  
holography  
[NASA-CASE-MFS-20596] c 14 N72-17324

## HYPERVELOCITY WIND TUNNELS

Hypersonic test facility Patent  
[NASA-CASE-XLA-00378] c 11 N71-15925

Hypersonic test facility Patent  
[NASA-CASE-XLA-05378] c 11 N71-21475

## HYSTERESIS

Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N89-27504

## ICE FORMATION

Ice detector  
[NASA-CASE-LAR-13403-1] c 03 N86-24673

## IDENTIFYING

Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779

## IGNITERS

Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784

Remote fire stack igniter --- with solenoid-controlled  
valve  
[NASA-CASE-MFS-21675-1] c 25 N74-33378

Molded composite pyrogen igniter for rocket motors ---  
solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275

Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405

Hollow cathode apparatus  
[NASA-CASE-NPO-15580-1] c 33 N85-21491

Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214

## IGNITION

Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184

Device and method for frictionally testing materials for  
ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413

## IGNITION LIMITS

High voltage pulse generator Patent  
[NASA-CASE-MSC-12178-1] c 09 N71-13518

## IGNITION SYSTEMS

Apparatus for igniting solid propellants Patent  
[NASA-CASE-XLE-00207] c 28 N70-33375

Ignition system for monopropellant combustion devices  
Patent  
[NASA-CASE-XNP-00249] c 28 N70-38249

Rocket motor system Patent  
[NASA-CASE-XLE-00323] c 28 N70-38505

Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c 28 N70-41311

Sustained arc ignition system  
[NASA-CASE-LEW-12444-1] c 33 N77-28385

## IGNITION TEMPERATURE

Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c 11 N71-28629

## ILLUMINATORS

Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474

Illumination system including a virtual light source  
Patent  
[NASA-CASE-HQN-10781] c 23 N71-30292

## IMAGE CONTRAST

Video signal enhancement system with dynamic range  
compression and modulation index expansion Patent  
[NASA-CASE-NPO-10343] c 07 N71-27341

Method and apparatus for producing an image from a  
transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932

## IMAGE CONVERTERS

Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c 36 N75-19652

Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473

Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c 35 N79-33449

Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c 44 N82-32841

**IMAGE CORRELATORS**

Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131

Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014

Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c 32 N79-14268

An electro-optical Doppler tracker means and method for optical correlation of synthetic aperture radar data  
[NASA-CASE-NPO-14998-1] c 33 N81-15194

Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N83-18975

Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348

**IMAGE DISSECTOR TUBES**

Apparatus for calibrating an image dissector tube  
[NASA-CASE-MFS-22208-1] c 33 N75-26244

Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c 74 N76-19935

**IMAGE ENHANCEMENT**

Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539

Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c 74 N75-25706

Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c 35 N79-10389

**IMAGE FILTERS**

Motion picture camera for optical pyrometry Patent  
[NASA-CASE-XLA-00062] c 14 N70-33254

Compact spectroradiometer  
[NASA-CASE-HQN-10683] c 14 N71-34389

Physical correction filter for improving the optical quality of an image  
[NASA-CASE-HQN-10542-1] c 74 N75-25706

**IMAGE INTENSIFIERS**

Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905

Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c 35 N79-10389

**IMAGE PROCESSING**

Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c 32 N79-14268

Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342

Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968

Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768

Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1CU] c 60 N86-23283

Photodetector array with image plane processing  
[NASA-CASE-LAR-13391-1] c 74 N86-33137

**IMAGE RESOLUTION**

Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072

**IMAGE ROTATION**

Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978

**IMAGE TUBES**

Image tube --- deriving electron beam replica of image  
[NASA-CASE-GSC-11602-1] c 33 N74-21850

System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c 74 N77-18893

**IMAGES**

Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474

Stereoscopic television system and apparatus  
[NASA-CASE-ARC-10160-1] c 23 N72-27728

Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N85-20868

Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732

**IMAGING TECHNIQUES**

Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868

Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence  
[NASA-CASE-GSC-11133-1] c 23 N72-11568

Phototransistor imaging system  
[NASA-CASE-MFS-20809] c 23 N73-13660

Multispectral imaging system  
[NASA-CASE-MSC-12404-1] c 23 N73-13661

Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741

Ritchey-Chretien Telescope  
[NASA-CASE-GSC-11487-1] c 14 N73-30393

Data storage, image tube type  
[NASA-CASE-MSC-14053-1] c 60 N74-12888

Optical instruments  
[NASA-CASE-MSC-14096-1] c 74 N74-15095

Electron microscope aperture system  
[NASA-CASE-ARC-10448-3] c 35 N77-14408

Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932

Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083

Chromatically corrected virtual image display --- lens design for flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N79-14892

Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288

System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c 74 N79-20856

Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c 74 N79-20857

Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c 74 N80-21140

Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c 74 N80-33210

System for forming a quadrified image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c 74 N81-17886

Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403

Image readout device with electronically variable spatial resolution  
[NASA-CASE-LAR-12633-1] c 33 N82-24416

Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659

Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918

High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898

Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920

Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 35 N84-25016

Optical scanner  
[NASA-CASE-GSC-12897-1] c 74 N84-25450

Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768

Optical system  
[NASA-CASE-NPO-15801-1] c 74 N85-23396

Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281

Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327

Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650

Photodetector array with image plane processing  
[NASA-CASE-LAR-13391-1] c 74 N86-33137

**IMIDES**

Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238

Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c 31 N74-13177

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854

Process for preparing phthalocyanine polymers  
[NASA-CASE-ARC-11511-1] c 23 N84-16259

Polyphenylene ethers with imide linking groups  
[NASA-CASE-LAR-12980-1] c 27 N84-22749

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347

High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N85-30033

Process for preparing phthalocyanine polymers  
[NASA-CASE-ARC-11511-2] c 27 N86-19461

High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590

**IMINES**

Synthesis of polymeric schiff bases by schiff-base exchange reactions Patent  
[NASA-CASE-XMF-08651] c 06 N71-11236

Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239

Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243

Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740

**IMMOBILIZATION**

Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159

Absolute focus lock for microscopes  
[NASA-CASE-LAR-10184] c 14 N72-22445

Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662

**IMPACT**

Impact energy absorbing system utilizing fractureable material  
[NASA-CASE-NPO-10671] c 15 N72-20443

Cosmic dust or other similar outer space particles impact location detector  
[NASA-CASE-GSC-11291-1] c 25 N72-33696

Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331

**IMPACT ACCELERATION**

Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146

**IMPACT DAMAGE**

Micrometeoroid penetration measuring device Patent  
[NASA-CASE-XLA-00941] c 14 N71-23240

Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450

**IMPACT LOADS**

Force transducer Patent  
[NASA-CASE-XAC-01101] c 14 N70-41957

Impact testing machine Patent  
[NASA-CASE-XNP-04817] c 14 N71-23225

**IMPACT RESISTANCE**

Electric storage battery  
[NASA-CASE-NPO-11021] c 03 N72-20032

Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c 24 N77-27188

**IMPACT STRENGTH**

High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c 14 N71-18625

**IMPACT TESTING MACHINES**

Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765

Impact testing machine Patent  
[NASA-CASE-XNP-04817] c 14 N71-23225

Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807

**IMPACT TESTS**

Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807

**IMPACT TOLERANCES**

High impact antenna Patent  
[NASA-CASE-NPO-10231] c 07 N71-26101

Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c 37 N79-10420

Improved impact tolerant material  
[NASA-CASE-LAR-12887-1] c 24 N84-20649

**IMPEDANCE**

Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887

**IMPEDANCE MATCHING**

Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334

Reflectometer for receiver input impedance match measurement Patent  
[NASA-CASE-XNP-10843] c 07 N71-11267

Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c 09 N71-23573

Triaxial antenna Patent  
[NASA-CASE-XGS-02290] c 07 N71-28809

**IMPEDANCE MEASUREMENT**

High impedance measuring apparatus Patent  
[NASA-CASE-XMS-08589-1] c 09 N71-20569

Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c 33 N80-32650

**IMPELLERS**

Fluidic angular velocity sensor  
[NASA-CASE-NPO-16479-1CU] c 35 N85-29219

**IMPLANTATION**

Telemeter adaptable for implanting in an animal Patent  
[NASA-CASE-XAC-05706] c 05 N71-12342

Magnetic electrical connectors for biomedical percutaneous implants [NASA-CASE-KSC-11030-1] c 52 N77-25772

Prosthetic occlusive device for an internal passageway [NASA-CASE-MFS-25740-1] c 52 N84-11744

**IMPLANTED ELECTRODES (BIOLOGY)**

Pocket ECG electrode [NASA-CASE-ARC-11258-1] c 52 N80-33081

Subcutaneous electrode structure [NASA-CASE-ARC-11117-1] c 52 N81-14612

Implantable electrical device [NASA-CASE-GSC-12560-1] c 52 N82-29863

**IMPLOSIONS**

Hypervelocity gun Patent [NASA-CASE-XAC-05902] c 11 N71-18578

**IMPREGNATING**

Composite lamination method [NASA-CASE-LAR-12019-1] c 24 N78-17150

Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith [NASA-CASE-NPO-13530-1] c 25 N81-17187

High temperature silicon carbide impregnated insulating fabrics [NASA-CASE-MS-18832-1] c 27 N83-18908

**IMPULSE GENERATORS**

Percutaneous connector device [NASA-CASE-KSC-10849-1] c 52 N77-14738

**IMPURITIES**

Method of making impurity-type semiconductor electrical contacts Patent [NASA-CASE-XMF-01016] c 26 N71-17818

Method of mitigating titanium impurities effects in p-type silicon material for solar cells [NASA-CASE-NPO-14635-1] c 44 N80-24741

Electromigration process for the purification of molten silicon during crystal growth [NASA-CASE-NPO-14831-1] c 76 N82-30105

Advanced vapor supply manifold [NASA-CASE-LAR-13259-1] c 37 N86-20800

**IN-FLIGHT MONITORING**

System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations [NASA-CASE-FRC-11024-1] c 02 N80-28300

**INCIDENCE**

Method of and means for testing a glancing-incidence mirror system of an X-ray telescope [NASA-CASE-MFS-22409-2] c 74 N78-15880

**INCIDENT RADIATION**

Solar cell assembly --- for use under high intensity illumination [NASA-CASE-LEW-11549-1] c 44 N77-19571

**INCLINATION**

Hingeless helicopter rotor with improved stability [NASA-CASE-ARC-10807-1] c 05 N77-17029

**INCOHERENT SCATTERING**

Rapidly pulsed, high intensity, incoherent light source [NASA-CASE-XLE-2529-3] c 33 N74-20859

**INDICATING INSTRUMENTS**

Missile stage separation indicator and stage initiator Patent [NASA-CASE-XLA-00791] c 03 N70-39930

Inductive liquid level detection system Patent [NASA-CASE-XLE-01609] c 14 N71-10500

Apparatus for the determination of the existence or non-existence of a bonding between two members Patent [NASA-CASE-MFS-13686] c 15 N71-18132

Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum [NASA-CASE-MFS-13130] c 10 N72-17173

Fatigue failure load indicator [NASA-CASE-LAR-12027-1] c 39 N79-22537

System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation [NASA-CASE-FRC-11005-1] c 06 N82-16075

Film advance indicator [NASA-CASE-LAR-12474-1] c 35 N82-26628

Adjustable indicating device for load position [NASA-CASE-MFS-28008-1] c 35 N85-20300

Fluid leak indicator [NASA-CASE-MS-20783-1] c 35 N86-20756

**INDIUM ALLOYS**

Method for attaching a fused-quartz mirror to a conductive metal substrate [NASA-CASE-MFS-23405-1] c 26 N77-29260

Solar cell collector [NASA-CASE-LEW-12552-1] c 44 N78-25527

**INDIUM COMPOUNDS**

Liquid crystal light valve structures [NASA-CASE-MS-20036-1] c 76 N85-33826

**INDUCTANCE**

Current dependent filter inductance [NASA-CASE-ERC-10139] c 09 N72-17154

Inductance device with vacuum insulation [NASA-CASE-LEW-10330-1] c 09 N72-27226

Direct reading inductance meter [NASA-CASE-NPO-13792-1] c 35 N77-32455

**INDUCTION HEATING**

Induction furnace with perforated tungsten foil shielding Patent [NASA-CASE-XLE-04026] c 14 N71-23267

Apparatus for use in the production of ribbon-shaped crystals from a silicon melt [NASA-CASE-NPO-14297-1] c 33 N81-19389

One-step dual purpose joining technique [NASA-CASE-LAR-12595-1] c 33 N82-26571

Induction heating gun [NASA-CASE-LAR-13181-1] c 31 N85-29083

**INDUCTION MOTORS**

Induction motor control system with voltage controlled oscillator circuit [NASA-CASE-MFS-21465-1] c 10 N73-32145

Variable frequency inverter for ac induction motors with torque, speed and braking control [NASA-CASE-MFS-22088-1] c 33 N75-15874

Power factor control system for AC induction motors [NASA-CASE-MFS-23280-1] c 33 N78-10376

Three phase power factor controller [NASA-CASE-MFS-25535-1] c 33 N81-12330

Power factor control system for ac induction motors [NASA-CASE-MFS-23988-1] c 33 N81-27395

Motor power factor controller with a reduced voltage starter [NASA-CASE-MFS-25586-1] c 33 N82-11360

Magnetic field control --- electromechanical torquing device [NASA-CASE-MFS-23828-1] c 33 N82-26569

Electrical power generating system [NASA-CASE-MFS-25302-1] c 33 N83-28319

Triac failure detector [NASA-CASE-MFS-25607-1] c 33 N83-34190

Control system for an induction motor with energy recovery [NASA-CASE-MFS-25477-1] c 33 N84-14424

Three phase power factor controller [NASA-CASE-MFS-25535-2] c 33 N84-22885

Motor power control circuit for ac induction motors [NASA-CASE-MFS-25323-1] c 33 N84-22886

Coupling an induction motor type generator to ac power lines --- making windmill generators compatible with public power lines [NASA-CASE-MFS-25302-2] c 33 N84-33660

Three-phase power factor controller with induced EMF sensing [NASA-CASE-MFS-25852-1] c 33 N84-33661

Solar powered actuator with continuously variable auxiliary power control [NASA-CASE-MFS-25637-1] c 44 N85-21769

Power control for ac motor [NASA-CASE-MFS-25861-1] c 33 N85-22877

**INDUCTORS**

Inductive liquid level detection system Patent [NASA-CASE-XLE-01609] c 14 N71-10500

Vacuum deposition apparatus Patent [NASA-CASE-XMF-01667] c 15 N71-17647

Constant frequency output two stage induction machine systems Patent [NASA-CASE-ERC-10065] c 09 N71-27364

Elimination of current spikes in buck power converters [NASA-CASE-NPO-14505-1] c 33 N81-19393

**INDUSTRIAL PLANTS**

Process for making diamonds [NASA-CASE-MFS-20698-2] c 15 N73-19457

**INDUSTRIAL WASTES**

Process of forming catalytic surfaces for wet oxidation reactions [NASA-CASE-MS-14831-1] c 25 N78-10225

Process for purification of waste water produced by a Kraft process pulp and paper mill [NASA-CASE-NPO-13847-2] c 85 N79-17747

**INERT ATMOSPHERE**

Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere [NASA-CASE-MFS-23250-1] c 35 N82-11432

**INERTIA**

Bidirectional step torque filter with zero backlash characteristic Patent [NASA-CASE-XGS-04227] c 15 N71-21744

**INERTIAL CONFINEMENT FUSION**

Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion [NASA-CASE-NPO-14596-3] c 31 N83-31896

Contactless pellet fabrication [NASA-CASE-NPO-15592-1] c 71 N84-16940

**INERTIAL GUIDANCE**

Hermetic sealed vibration damper Patent [NASA-CASE-MSC-10959] c 15 N71-26243

**INERTIAL NAVIGATION**

Autonomous navigation system --- gyroscopic pendulum for air navigation [NASA-CASE-ARC-11257-1] c 04 N81-21047

**INERTIAL PLATFORMS**

Clamping assembly for inertial components Patent [NASA-CASE-XMS-02184] c 15 N71-20813

Azimuth laying system Patent [NASA-CASE-XMF-01669] c 21 N71-23289

Temperature compensated digital inertial sensor --- circuit for maintaining inertial element of gyroscope or accelerometer at constant position [NASA-CASE-NPO-13044-1] c 35 N74-15094

Attitude control system [NASA-CASE-MFS-22787-1] c 15 N77-10113

Rim inertial measuring system [NASA-CASE-LAR-12052-1] c 18 N81-29152

**INERTIAL REFERENCE SYSTEMS**

Attitude control system Patent [NASA-CASE-XGS-04393] c 21 N71-14159

Inertial reference apparatus Patent [NASA-CASE-XAC-03107] c 23 N71-16098

**INFLATABLE SPACECRAFT**

Thermal control of space vehicles Patent [NASA-CASE-XLA-01291] c 33 N70-36617

Passive communication satellite Patent [NASA-CASE-XLA-00210] c 30 N70-40309

Rotating mandrel for assembly of inflatable devices Patent [NASA-CASE-XLA-04143] c 15 N71-17687

Method of making an inflatable panel Patent [NASA-CASE-XLA-03497] c 15 N71-23052

Orbital escape device Patent [NASA-CASE-XMS-06162] c 31 N71-28851

**INFLATABLE STRUCTURES**

Aeroflexible structures [NASA-CASE-XLA-06095] c 01 N69-39981

Life raft Patent [NASA-CASE-XMS-00863] c 05 N70-34857

Life preserver Patent [NASA-CASE-XMS-00864] c 05 N70-36493

Inflatable honeycomb Patent [NASA-CASE-XLA-00204] c 32 N70-36536

Inflatable radar reflector unit Patent [NASA-CASE-XMS-00893] c 07 N70-40063

Excessive temperature warning system Patent [NASA-CASE-XLA-01926] c 14 N71-15620

Inflation system for balloon type satellites Patent [NASA-CASE-XGS-03351] c 31 N71-16081

Aerodynamic protection for space flight vehicles Patent [NASA-CASE-XNP-02507] c 31 N71-17679

Self supporting space vehicle Patent [NASA-CASE-XLA-00117] c 31 N71-17680

Conforming polisher for aspheric surface of revolution Patent [NASA-CASE-XGS-02884] c 15 N71-22705

Method of making inflatable honeycomb Patent [NASA-CASE-XLA-03492] c 15 N71-22713

Collapsible antenna boom and transmission line Patent [NASA-CASE-MFS-20068] c 07 N71-27191

Inflatable tether Patent [NASA-CASE-XMS-10993] c 15 N71-28936

Inflatable transpiration cooled nozzle [NASA-CASE-MFS-20619] c 28 N72-11708

Modification of one man life raft [NASA-CASE-LAR-10241-1] c 54 N74-14845

Emergency space-suit helmet [NASA-CASE-MS-10954-1] c 54 N78-18761

Pressure control valve --- inflating flexible bladders [NASA-CASE-ARC-11251-1] c 37 N81-17433

Pneumatic inflatable end effector [NASA-CASE-MFS-23696-1] c 54 N81-26718

Inflatable device for installing strain gage bridges [NASA-CASE-FRC-11068-1] c 35 N84-12443

**INFORMATION RETRIEVAL**

Multiple hologram recording and readout system Patent [NASA-CASE-ERC-10151] c 16 N71-29131

**INFRARED DETECTORS**

Temperature sensitive capacitor device [NASA-CASE-XNP-09750] c 14 N69-39937

Sight switch using an infrared source and sensor Patent [NASA-CASE-XMF-03934] c 09 N71-22985

Infrared detectors [NASA-CASE-LAR-10728-1] c 14 N73-12445

Doped Josephson tunneling junction for use in a sensitive IR detector [NASA-CASE-NPO-13348-1] c 33 N75-31332

Multispectral scanner optical system [NASA-CASE-MS-18255-1] c 74 N80-33210

- Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N83-13360
- Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597
- Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590
- INFRARED INSTRUMENTS**  
Infrared scanner Patent  
[NASA-CASE-XLA-00120] c 21 N70-33181
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- INFRARED INTERFEROMETERS**  
Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c 35 N78-18395
- INFRARED LASERS**  
Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
[NASA-CASE-NPO-11919-1] c 35 N74-11284
- Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942
- Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029
- INFRARED RADIATION**  
High-speed infrared furnace  
[NASA-CASE-XLE-10466] c 17 N69-25147
- High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088
- Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N85-30779
- Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127
- INFRARED REFLECTION**  
Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186
- INFRARED SCANNERS**  
Infrared scanner Patent  
[NASA-CASE-XLA-00120] c 21 N70-33181
- Infrared horizon locator  
[NASA-CASE-LAR-10726-1] c 14 N73-20475
- INFRARED SPECTRA**  
Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426
- INFRARED SPECTROMETERS**  
Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699
- Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-14372-1] c 35 N80-26635
- INFRARED SPECTROSCOPY**  
Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c 35 N79-14348
- INFRARED TELESCOPES**  
Optical system with reflective baffles  
[NASA-CASE-ARC-11502-1] c 74 N86-20125
- INFRASONIC FREQUENCIES**  
Resonant infrasonic gauging apparatus  
[NASA-CASE-MS-C-11847-1] c 14 N72-11363
- INHIBITORS**  
Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c 28 N79-14228
- INITIATORS (EXPLOSIVES)**  
Missile stage separation indicator and stage initiator Patent  
[NASA-CASE-XLA-00791] c 03 N70-39930
- Safe-arm initiator Patent  
[NASA-CASE-LAR-10372] c 09 N71-18599
- Electroexplosive device  
[NASA-CASE-NPO-13858-1] c 28 N79-11231
- INJECTION**  
Thickness measuring and injection device Patent  
[NASA-CASE-MFS-20261] c 14 N71-27005
- High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523
- INJECTION LASERS**  
Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305
- INJECTORS**  
Rocket propellant injector Patent  
[NASA-CASE-XLE-00103] c 28 N70-33241
- Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c 28 N70-38199
- Injector for bipropellant rocket engines Patent  
[NASA-CASE-XMF-00148] c 28 N70-38710
- Dust particle injector for hypervelocity accelerators Patent  
[NASA-CASE-XGS-06628] c 24 N71-16213
- Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654
- Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736
- Bipropellant injector  
[NASA-CASE-XNP-09461] c 28 N72-23809
- Coaxial injector for reaction motors  
[NASA-CASE-NPO-11095] c 15 N72-25455
- Injector for use in high voltage isolators for liquid feed lines  
[NASA-CASE-NPO-11377] c 15 N73-27406
- Rocket injector head  
[NASA-CASE-XMF-04592-1] c 20 N79-21125
- Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFG-25988-1] c 20 N85-20008
- INKS**  
Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930
- INLET FLOW**  
High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c 15 N70-36908
- Gas turbine combustor Patent  
[NASA-CASE-LEW-10296-1] c 28 N71-28915
- Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c 02 N74-20646
- Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270
- Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c 35 N76-14431
- Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c 35 N77-24455
- Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089
- Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976
- INLET NOZZLES**  
Rocket injector head  
[NASA-CASE-XMF-04592-1] c 20 N79-21125
- INLET PRESSURE**  
Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466
- Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c 35 N76-14431
- INOCULATION**  
Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c 51 N75-13502
- INORGANIC COATINGS**  
Diffuse reflective coating  
[NASA-CASE-GSC-11214-1] c 06 N73-13128
- Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233
- INORGANIC COMPOUNDS**  
Method of making membranes  
[NASA-CASE-XNP-04264] c 03 N69-21337
- Inorganic solid film lubricants Patent  
[NASA-CASE-XMF-03988] c 15 N71-21403
- Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739
- Inorganic thermal control coatings  
[NASA-CASE-MFS-20011] c 18 N72-22566
- Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c 44 N78-25530
- Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c 76 N79-21910
- INORGANIC PEROXIDES**  
Process for preparing higher oxides of the alkali and alkaline earth metals  
[NASA-CASE-ARC-10992-1] c 26 N78-32229
- Process for the preparation of calcium superoxide  
[NASA-CASE-ARC-11053-1] c 25 N79-10162
- INPUT**  
Remodulator filter Patent  
[NASA-CASE-NPO-10198] c 09 N71-24806
- Active RC networks  
[NASA-CASE-ARC-10020] c 10 N72-17172
- High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814
- INPUT/OUTPUT ROUTINES**  
Analog to digital converter  
[NASA-CASE-NPO-13385-1] c 33 N76-18345
- INSERTION**  
Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836
- INSERTION LOSS**  
Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent  
[NASA-CASE-XNP-01183] c 10 N71-16057
- INSERTS**  
Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736
- INSPECTION**  
Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c 38 N78-17396
- Method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c 09 N82-29330
- Apparatus and method for inspecting a bearing ball --- eddy current inspection technique  
[NASA-CASE-MFS-25833-1] c 35 N83-21318
- Apparatus and method for inspecting a bearing ball  
[NASA-CASE-MFS-25833-1] c 35 N86-32698
- INSTALLING**  
Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c 20 N76-22296
- Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409
- A method and technique for installing light-weight fragile, high-temperature fiber insulation  
[NASA-CASE-MS-C-18934-3] c 24 N82-26387
- Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443
- INSTRUMENT COMPENSATION**  
Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-18689-1CU] c 74 N86-33138
- INSTRUMENT ERRORS**  
Radiation direction detector including means for compensating for photocell aging Patent  
[NASA-CASE-XLA-00183] c 14 N70-40239
- INSTRUMENT FLIGHT RULES**  
Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c 11 N71-10748
- INSTRUMENT ORIENTATION**  
Plurality of photosensitive cells on a pyramidal base for planetary trackers  
[NASA-CASE-XNP-04180] c 07 N69-39736
- Azimuth laying system Patent  
[NASA-CASE-XMF-01669] c 21 N71-23289
- Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673
- Solar energy powered heliostropes  
[NASA-CASE-GSC-10945-1] c 21 N72-31637
- INSTRUMENT PACKAGES**  
Apparatus for ejection of an instrument cover  
[NASA-CASE-XMF-04132] c 15 N69-27502
- Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c 15 N70-36409
- Foam generator Patent  
[NASA-CASE-XLA-00838] c 03 N70-36778
- Velocity package Patent  
[NASA-CASE-XLA-01339] c 31 N71-15692
- Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523
- INSTRUMENTS**  
Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436
- Linear differential pressure sensor Patent  
[NASA-CASE-XMF-01974] c 14 N71-22752
- Precision thrust gage Patent  
[NASA-CASE-XGS-02319] c 14 N71-22965
- Self-calibrating displacement transducer Patent  
[NASA-CASE-XLA-00781] c 09 N71-22999
- Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327
- Scientific experiment flexible mount  
[NASA-CASE-MS-C-12372-1] c 31 N72-25842
- Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c 37 N78-27424
- Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425
- INSULATED STRUCTURES**  
Piping arrangement through a double chamber structure  
[NASA-CASE-XNP-08882] c 15 N69-39935
- INSULATION**  
Electrode construction Patent  
[NASA-CASE-ARC-10043-1] c 05 N71-11193
- Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c 18 N71-22998
- Method of removing insulated material from insulated wires  
[NASA-CASE-FRC-10038] c 15 N72-20444
- Inductance device with vacuum insulation  
[NASA-CASE-LEW-10330-1] c 09 N72-27226



Insulated electrocardiographic electrodes --- without paste electrolyte  
[NASA-CASE-MSC-14339-1] c 05 N75-24716  
Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c 27 N76-22376  
Two-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-1] c 27 N76-22377  
Three-component ceramic coating for silica insulation  
[NASA-CASE-MSC-14270-2] c 27 N76-23426  
Field effect transistor and method of construction thereof  
[NASA-CASE-MFS-23312-1] c 33 N78-27326  
Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388  
Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807

**INSULATORS**

Electrostatic thruster with improved insulators Patent  
[NASA-CASE-XLE-01902] c 28 N71-10574  
High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302  
Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763

**INTAKE SYSTEMS**

Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788  
The engine air intake system  
[NASA-CASE-ARC-10761-1] c 07 N77-18154  
Fluid sampling device  
[NASA-CASE-GSC-12143-1] c 35 N77-32456  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278  
Reciprocating engines  
[NASA-CASE-MSC-16239-1] c 37 N81-32510  
Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178  
Solid sorbent air sampler  
[NASA-CASE-MSC-20653-1] c 35 N86-26595

**INTEGRATED CIRCUITS**

Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897  
Pulse rise time and amplitude detector Patent  
[NASA-CASE-XMF-08804] c 09 N71-24717  
Method and apparatus for swept-frequency impedance measurements of welds  
[NASA-CASE-ARC-10176-1] c 15 N72-21464  
Integrated circuit including field effect transistor and cermet resistor  
[NASA-CASE-GSC-10835-1] c 09 N72-33205  
Derivation of a tangent function using an integrated circuit four-quadrant multiplier  
[NASA-CASE-MSC-13907-1] c 10 N73-26230  
Coaxial inverted geometry transistor having buried emitter  
[NASA-CASE-ARC-10330-1] c 09 N73-32112  
Integrated circuit package with lead structure and method of preparing the same  
[NASA-CASE-MFS-21374-1] c 33 N74-12951  
Integrated P-channel MOS gyrator  
[NASA-CASE-MFS-22343-1] c 33 N74-34638  
Four phase logic systems --- including integrated microcircuits  
[NASA-CASE-MSC-14240-1] c 33 N75-14957  
Integrable power gyrator --- with Z-matrix design using parallel transistors  
[NASA-CASE-MFS-22342-1] c 33 N75-30428  
Cross correlation anomaly detection system  
[NASA-CASE-NPO-13283] c 38 N78-17395  
Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321  
Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332  
Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c 44 N81-12542  
Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348  
Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N83-13360  
Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884  
Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N85-20250  
Split-cross-bridge resistor for testing for proper fabrication of integrated circuits  
[NASA-CASE-NPO-16021-1] c 33 N85-30187  
Ion beam sputter etching  
[NASA-CASE-LEW-13693-1] c 31 N86-20587

**INTEGRATORS**

Operational integrator Patent  
[NASA-CASE-NPO-10230] c 09 N71-12520  
Variable duration pulse integrator Patent  
[NASA-CASE-XLA-01219] c 10 N71-23084  
Variable width pulse integrator Patent  
[NASA-CASE-XLA-03356] c 10 N71-23315  
Feedback integrator with grounded capacitor Patent  
[NASA-CASE-XAC-10607] c 10 N71-23669  
High speed phase detector Patent  
[NASA-CASE-XNP-01306-2] c 09 N71-24596  
Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227

**INTERFACES**

Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N84-12092  
LDV multiplexer interface  
[NASA-CASE-ARC-11536-1] c 33 N85-30202

**INTERFACIAL TENSION**

Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278  
Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176

**INTERFEROMETERS**

Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent  
[NASA-CASE-XGS-03532] c 14 N71-17627  
Incremental motion drive system Patent  
[NASA-CASE-XNP-08897] c 15 N71-17694  
Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c 16 N71-24170  
Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215  
Interferometer-polarimeter  
[NASA-CASE-NPO-11239] c 14 N73-12446  
Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c 14 N73-25463  
High resolution Fourier interferometer-spectrophotopolarimeter  
[NASA-CASE-NPO-13604-1] c 35 N76-31490  
Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c 35 N79-14348  
Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c 35 N80-20563  
Interferometer  
[NASA-CASE-NPO-14502-1] c 74 N81-17888  
Interferometer --- high resolution  
[NASA-CASE-NPO-14448-1] c 74 N81-29963  
Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448  
Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N82-33681  
Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949  
Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577

**INTERFEROMETRY**

Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391  
Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359

Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282  
Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629

**INTERLAYERS**

Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235

**INTERMEDIATE FREQUENCY AMPLIFIERS**

Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c 32 N76-14321

**INTERMETALLICS**

Twisted multifilament superconductor  
[NASA-CASE-LEW-11726-1] c 26 N73-26752  
Synthesis of superconducting compounds by explosive compaction of powders  
[NASA-CASE-MFS-20861-1] c 18 N73-32437  
Improved nickel base coating alloy --- oxidation resistant coatings  
[NASA-CASE-LEW-13834-1] c 26 N83-24639  
Oxidizing seal for a turbine tip gas path  
[NASA-CASE-LEW-14053-1] c 37 N85-34402  
Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267

**INTERNAL COMBUSTION ENGINES**

Fuel injection pump for internal combustion engines Patent  
[NASA-CASE-MSC-12139-1] c 28 N71-14058  
Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983  
System for preconditioning a combustible vapor  
[NASA-CASE-NPO-12072] c 28 N72-22772  
System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NPO-13402-1] c 37 N76-18457  
Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497  
Hydrogen-fueled engine  
[NASA-CASE-NPO-13763-1] c 44 N78-33526  
Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405  
Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c 35 N79-14345  
Start up system for hydrogen generator used with an internal combustion engine  
[NASA-CASE-NPO-13849-1] c 28 N80-10374  
Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129  
Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c 37 N83-36483  
Real time pressure signal system for a rotary engine  
[NASA-CASE-LEW-13622-1] c 07 N84-22559

**INTERPLANETARY SPACE**

Heat shield Patent  
[NASA-CASE-XMS-00486] c 33 N70-33344  
RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171

**INTERPLANETARY SPACECRAFT**

Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075

**INTERPLANETARY TRAJECTORIES**

Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394

**INTRACRANIAL PRESSURE**

Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c 52 N80-18691

**INTRAOCULAR PRESSURE**

Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c 52 N80-14684  
Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c 52 N80-18690

**INTRAVEHICULAR ACTIVITY**

Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012

**INTRAVENOUS PROCEDURES**

Bio-medical flow sensor --- intravenous procedures  
[NASA-CASE-MSC-18761-1] c 52 N83-27577

**INTRUSION**

Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559

**INVENTIONS**

Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583  
Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244  
Inductive energy for rapid strain gauge attachment  
[NASA-CASE-LAR-13237-1] c 35 N86-24960

**INVERTED CONVERTERS (DC TO AC)**

Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090  
Variable frequency inverter for ac induction motors with torque, speed and braking control  
[NASA-CASE-MFS-22088-1] c 33 N75-15874  
Solar cell system having alternating current output  
[NASA-CASE-LEW-12806-2] c 44 N81-12542

**Power converter**

[NASA-CASE-FRC-11014-1] c 33 N82-18494  
Ferroresonant regulated power supply  
[NASA-CASE-NPO-15977-1-CU] c 33 N86-20673

**INVERTERS**

Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c 09 N69-39984  
Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c 09 N72-25254  
Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c 33 N78-10377  
Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254  
Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220  
Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953



- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227
- IODINE**  
Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c 03 N71-18698  
Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027  
Iodine generator for reclaimed water purification  
[NASA-CASE-MS-C-14632-1] c 54 N78-14784
- IODINE COMPOUNDS**  
Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- IODINE ISOTOPES**  
Production of high purity I-123  
[NASA-CASE-LEW-10518-1] c 24 N72-33681  
Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c 25 N76-27383  
Production of I-123  
[NASA-CASE-LEW-11390-3] c 25 N76-29379
- ION ACCELERATORS**  
Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-LEW-10278-1] c 15 N71-28582  
Ion beam accelerator system  
[NASA-CASE-NPO-15547-1] c 72 N84-16959
- ION BEAMS**  
Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173  
Dispensing targets for ion beam particle generators  
[NASA-CASE-NPO-13112-1] c 73 N74-26767  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c 20 N74-31269  
Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c 20 N76-21276  
Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c 20 N77-10148  
Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c 25 N78-27226  
Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455  
Ion beam accelerator system  
[NASA-CASE-NPO-15547-1] c 72 N84-16959  
Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095  
Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565  
Improved heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N84-32425  
Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267  
Generation of intense negative ion beams  
[NASA-CASE-NPO-16061-1-CU] c 72 N85-29701  
Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N86-20587  
Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N86-32556
- ION CHARGE**  
Quadrupole mass filter with means to generate a noise spectrum exclusive of the resonant frequency of the desired ions to deflect stable ions  
[NASA-CASE-XNP-04231] c 14 N73-32325
- ION CONCENTRATION**  
Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c 27 N74-13270
- ION CURRENTS**  
System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518
- ION CYCLOTRON RADIATION**  
Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c 35 N77-10492
- ION DENSITY (CONCENTRATION)**  
Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994
- ION ENGINES**  
Ion thruster cathode  
[NASA-CASE-XLE-07087] c 06 N69-39889  
High-vacuum condenser tank for ion rocket tests Patent  
[NASA-CASE-XLE-00168] c 11 N70-33278  
Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422  
Ion rocket Patent  
[NASA-CASE-XLE-00376] c 28 N70-37245
- Rocket engine Patent  
[NASA-CASE-XLE-00342] c 28 N70-37980  
Thrust dynamometer Patent  
[NASA-CASE-XLE-00702] c 14 N70-40203  
Apparatus for increasing ion engine beam density Patent  
[NASA-CASE-XLE-00519] c 28 N70-41576  
Double optic system for ion engine Patent  
[NASA-CASE-XNP-02839] c 28 N70-41922  
Electrostatic ion engine having a permanent magnetic circuit Patent  
[NASA-CASE-XLE-01124] c 28 N71-14043  
Electrostatic ion rocket engine Patent  
[NASA-CASE-XLE-02066] c 28 N71-15661  
System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518  
Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081  
Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent  
[NASA-CASE-XLE-04501] c 09 N71-23190  
Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293  
Ion thruster accelerator system Patent  
[NASA-CASE-LEW-10106-1] c 28 N71-26642  
Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781  
High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01854] c 28 N71-26850  
Feed system for an ion thruster  
[NASA-CASE-NPO-10737] c 28 N72-11709  
Ion thruster with a combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c 28 N73-24783  
Single grid accelerator for an ion thruster  
[NASA-CASE-XLE-10453-2] c 28 N73-27699  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310  
Method of constructing dished ion thruster grids to provide hole array spacing compensation  
[NASA-CASE-LEW-11876-1] c 20 N76-21276  
Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N85-20248
- ION EXCHANGE MEMBRANE ELECTROLYTES**  
Method of making membranes  
[NASA-CASE-XNP-04264] c 03 N69-21337  
Ion-exchange membrane with platinum electrode assembly Patent  
[NASA-CASE-XMS-02063] c 03 N71-29044  
Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c 44 N79-17313  
Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187  
Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268  
Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680
- ION EXCHANGE RESINS**  
Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c 44 N78-25530  
Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687  
Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- ION EXCHANGING**  
Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076  
Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244
- ION EXTRACTION**  
Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148  
Ion beam accelerator system  
[NASA-CASE-NPO-15547-1] c 72 N84-16959
- ION IMPLANTATION**  
Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c 33 N81-26360
- ION IRRADIATION**  
Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437
- Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N86-32556
- ION MOTION**  
Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016
- ION PLATING**  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524  
Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695
- ION PROBES**  
Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c 14 N71-28863
- ION PROPULSION**  
Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
[NASA-CASE-XMF-00923] c 28 N70-36802  
Ion rocket Patent  
[NASA-CASE-XLE-00376] c 28 N70-37245  
Rocket engine Patent  
[NASA-CASE-XLE-00342] c 28 N70-37980  
Method of producing porous tungsten ionizers for ion rocket engines Patent  
[NASA-CASE-XLE-00455] c 28 N70-38197  
Double optic system for ion engine Patent  
[NASA-CASE-XNP-02839] c 28 N70-41922  
Electron bombardment ion engine Patent  
[NASA-CASE-XNP-04124] c 28 N71-21822  
Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173  
Ion thruster accelerator system Patent  
[NASA-CASE-LEW-10106-1] c 28 N71-26642  
Feed system for an ion thruster  
[NASA-CASE-NPO-10737] c 28 N72-11709  
Ion thruster  
[NASA-CASE-LEW-10770-1] c 28 N72-22770  
Ion thruster magnetic field control  
[NASA-CASE-LEW-10835-1] c 28 N72-22771  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310  
Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c 37 N76-14461  
Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c 20 N77-20162  
Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c 20 N79-20179  
A dc to dc converter  
[NASA-CASE-MFS-25430-1] c 33 N84-16453  
Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256
- ION PUMPS**  
Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c 35 N77-14406
- ION SOURCES**  
Focusing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618  
Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c 17 N71-23046  
Ion thruster accelerator system Patent  
[NASA-CASE-LEW-10106-1] c 28 N71-26642  
High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c 28 N71-28850  
Apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c 14 N72-29464  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c 20 N74-31269  
Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c 37 N75-19684  
Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163  
Hydrogen hollow cathode ion source  
[NASA-CASE-LEW-12940-1] c 72 N80-33186
- ION TRAPS (INSTRUMENTATION)**  
Method and apparatus for measurement of trap density and energy distribution in dielectric films  
[NASA-CASE-NPO-13443-1] c 76 N76-20994
- IONIC MOBILITY**  
Solid electrolyte cell  
[NASA-CASE-NPO-15269-1] c 44 N82-29710
- IONIZATION CHAMBERS**  
Baseline stabilization system for ionization detector Patent  
[NASA-CASE-XNP-03128] c 10 N70-41991  
Electron bombardment ion engine Patent  
[NASA-CASE-XNP-04124] c 28 N71-21822  
A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090

- Apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c 14 N72-29464
- IONIZATION GAGES**  
Ionization vacuum gauge Patent  
[NASA-CASE-XNP-00646] c 14 N70-35666  
Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
[NASA-CASE-XLE-00787] c 14 N71-21090  
Apparatus for ionization analysis  
[NASA-CASE-ARC-10017-1] c 14 N72-29464  
Ultrahigh vacuum measuring ionization gauge  
[NASA-CASE-XLA-05087] c 14 N73-30391
- IONIZATION POTENTIALS**  
Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678  
Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374
- IONIZED GASES**  
Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c 25 N69-39884  
Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641  
Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148  
Hollow cathode apparatus  
[NASA-CASE-NPO-15560-1] c 33 N85-21491
- IONIZERS**  
Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10960-1] c 03 N71-24718  
Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310  
Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184
- IONIZING RADIATION**  
High-voltage cable Patent  
[NASA-CASE-XNP-00738] c 09 N70-38201  
Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c 37 N74-18126  
Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N86-24840
- IONOSPHERE**  
Ionospheric battery Patent  
[NASA-CASE-XGS-01593] c 03 N70-35408
- IONOSPHERIC DISTURBANCES**  
Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- IONOSPHERIC ELECTRON DENSITY**  
Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- IONOSPHERIC SOUNDING**  
Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- IONS**  
Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477
- IRIDIUM**  
Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346
- IRISES (MECHANICAL APERTURES)**  
Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170  
Thin film microwave iris  
[NASA-CASE-LAR-10511-1] c 09 N72-29172
- IRON**  
Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721
- IRON ALLOYS**  
Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c 26 N78-18182  
Process for making a high toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-2] c 26 N79-22271  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484  
Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- IRON CHLORIDES**  
Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- IRON COMPOUNDS**  
Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246

## IRRADIATION

- Solar sensor having coarse and fine sensing with matched preirradiated cells and method of selecting cells Patent  
[NASA-CASE-XLA-01584] c 14 N71-23269  
Apparatus for obtaining isotropic irradiation of a specimen  
[NASA-CASE-MFS-20095] c 24 N72-11595  
Production of pure metals  
[NASA-CASE-LEW-10906-1] c 25 N74-30502  
Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332  
Violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c 27 N80-26446  
Method of measuring field funneling and range straggling in semiconductor charge-collecting junctions  
[NASA-CASE-NPO-16584-1-CU] c 76 N86-25269

## IRRIGATION

- Solar-powered pump  
[NASA-CASE-NPO-13567-1] c 44 N76-29701

## ISOLATION

- High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146

## ISOLATORS

- Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781  
Positive isolation disconnect  
[NASA-CASE-MSC-16043-1] c 37 N79-11402  
Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350

## ISOPROPYL ALCOHOL

- Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c 06 N73-30102

## ISOTHERMAL LAYERS

- Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353

## ISOTHERMAL PROCESSES

- Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366

## ISOTOPE SEPARATION

- Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477

## J

## JET AIRCRAFT

- Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788  
Multiple pure tone elimination strut assembly --- air breathing engines  
[NASA-CASE-FRC-11062-1] c 71 N82-16800

## JET AIRCRAFT NOISE

- Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332  
Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c 07 N74-32418  
Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c 07 N74-33218  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c 07 N76-18117  
Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884  
Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873

## JET AMPLIFIERS

- Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466  
Fluid jet amplifier Patent  
[NASA-CASE-XLE-09341] c 12 N71-28741

## JET BLAST EFFECTS

- Single action separation mechanism Patent  
[NASA-CASE-XLA-00188] c 15 N71-22874

## JET CONTROL

- Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c 21 N70-36938

## JET ENGINES

- Absorptive splitter for closely spaced supersonic engine air inlets Patent  
[NASA-CASE-XLA-02865] c 28 N71-15563  
Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c 14 N71-20429  
Nacelle afterbody for jet engines Patent  
[NASA-CASE-XLA-10450] c 28 N71-21493  
Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515

Variably positioned guide vanes for aerodynamic

- choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c 07 N76-18117  
The engine air intake system  
[NASA-CASE-ARC-10761-1] c 07 N77-18154  
Stator rotor tools  
[NASA-CASE-MSC-16000-1] c 37 N78-24544  
Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483  
Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MRS-25791-1] c 09 N84-27749

## JET EXHAUST

- Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c 07 N74-27490  
Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089  
Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298

## JET FLAPS

- Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332

## JET FLOW

- Two phase flow system with discrete impinging two-phase jets  
[NASA-CASE-NPO-11556] c 12 N72-25292

## JET MIXING FLOW

- Rocket engine injector Patent  
[NASA-CASE-XLE-00111] c 28 N70-38199

## JET NOZZLES

- Fluid jet amplifier  
[NASA-CASE-XLE-03512] c 12 N69-21466  
Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629  
Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093

## JET PROPULSION

- Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c 07 N78-27121

## JET PUMPS

- Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182

## JET THRUST

- Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c 21 N71-15582  
Reactance control system Patent  
[NASA-CASE-XMF-01598] c 21 N71-15583  
Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039

## JETTISON SYSTEMS

- Space capsule ejection assembly Patent  
[NASA-CASE-XMF-03169] c 31 N71-15675  
Method and system for ejecting fairing sections from a rocket vehicle  
[NASA-CASE-GSC-10590-1] c 31 N73-14853  
Explosively activated egress area  
[NASA-CASE-LAR-12624-1] c 01 N83-35992

## JIGS

- Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c 37 N76-21554  
Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c 44 N79-19447

## JOINING

- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096

## JOINTS (ANATOMY)

- Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194  
Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195  
Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c 05 N71-24623  
Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c 54 N75-12616  
Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c 54 N77-30749  
Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c 54 N79-24651

## JOINTS (JUNCTIONS)

- Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c 09 N69-21542  
Elastic universal joint Patent  
[NASA-CASE-XNP-00416] c 15 N70-36947  
Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371  
Pressure garment joint Patent  
[NASA-CASE-XMS-09636] c 05 N71-12344  
Technique of elbow bending small jacketed transfer lines Patent  
[NASA-CASE-XNP-10475] c 15 N71-24679

Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148

Frictionless universal joint Patent  
[NASA-CASE-NPO-10646] c 15 N71-28467

Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937

Universal restrainer and joint Patent  
[NASA-CASE-XNP-02278] c 15 N71-28951

Diffusion welding in air --- solid state welding of butt joint by fusion welding, surface cleaning, and heating  
[NASA-CASE-LEW-11387-1] c 37 N74-18128

Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
[NASA-CASE-LAR-10900-1] c 37 N74-23064

Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c 54 N74-32546

Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c 37 N75-12326

Latching device  
[NASA-CASE-MFS-21606-1] c 37 N75-19685

Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c 37 N75-26372

Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c 37 N76-14460

Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c 54 N78-17676

Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735

Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c 37 N81-15363

Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673

Interlocking wedge joint  
[NASA-CASE-LAR-12729-1] c 37 N82-26676

Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987

Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c 37 N82-32732

Automatic weld torch guidance control system  
[NASA-CASE-MFS-25807] c 37 N83-20154

Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944

Foldable self-erecting joint --- space erectable structures  
[NASA-CASE-MSC-20635-1] c 18 N84-32424

Shoulder and hip joint for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N84-33021

Elbow and knee joint for hard space suits and the like  
[NASA-CASE-ARC-11610-1] c 54 N85-20666

Shoulder and hip joint for hard space suits and the like  
[NASA-CASE-ARC-11543-1] c 54 N85-21986

Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336

Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605

Fluid leak indicator  
[NASA-CASE-MSC-20783-1] c 35 N86-20756

Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630

Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619

Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620

Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507

Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N86-31630

**JOSEPHSON JUNCTIONS**

Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c 33 N75-31332

Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348

**JOULE-THOMSON EFFECT**

Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190

Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-12521-1] c 31 N83-31897

**JOURNAL BEARINGS**

Slit regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c 15 N70-38620

Air bearing assembly for curved surfaces  
[NASA-CASE-MFS-20423] c 15 N72-11388

Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c 37 N74-21061

Journal Bearings  
[NASA-CASE-LEW-11076-2] c 37 N74-32921

Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c 37 N75-30562

Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c 37 N76-15461

Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606

**JUNCTION DIODES**

Phototransistor  
[NASA-CASE-MFS-20407] c 09 N73-19235

Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-2] c 33 N75-25041

Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314

Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590

**JUNCTION TRANSISTORS**

Apparatus for ballasting high frequency transistors  
[NASA-CASE-XGS-05003] c 09 N69-24318

Semiconductor transducer device  
[NASA-CASE-ERC-10087-2] c 14 N72-31446

Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c 37 N75-26372

Floating emitter solar cell junction transistor  
[NASA-CASE-NPO-16467-1-CU] c 33 N86-24908

## K

**KETONES**

Polyenamides from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N86-19462

**KEYING**

High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814

Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1SB] c 54 N86-22114

**KIDNEY DISEASES**

Aldehyde-containing uric acid-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236

**KIDNEYS**

Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913

**KINETIC ENERGY**

Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861

Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c 34 N79-20335

**KINETIC FRICTION**

Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995

Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413

**KINETICS**

Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477

**KNEE (ANATOMY)**

Elbow and knee joint for hard space suits and the like  
[NASA-CASE-ARC-11610-1] c 54 N85-20666

Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619

**KRAFT PROCESS (WOODPULP)**

Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747

## L

**LABORATORY EQUIPMENT**

Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177

Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080

Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372

Variable angle tube holder  
[NASA-CASE-LAR-10507-1] c 11 N72-25284

Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025

Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c 15 N73-19458

Automatic real-time pair-feeding system for animals  
[NASA-CASE-ARC-10302-1] c 51 N74-15778

Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c 51 N77-27677

Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c 39 N78-10493

The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874

Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10991-1] c 25 N78-14104

Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c 25 N79-14169

Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126

Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N84-20808

Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751

**LACQUERS**

Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c 27 N81-25209

Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267

**LADDERS**

Dielectric based submillimeter backward wave oscillator circuit  
[NASA-CASE-LEW-13736-1] c 33 N84-27974

**LAMINAR FLOW**

Laminar flow enhancement Patent  
[NASA-CASE-NPO-10122] c 12 N71-17631

Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c 02 N80-20224

Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178

**LAMINAR FLOW AIRFOILS**

Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N84-12092

**LAMINATES**

Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c 17 N71-23046

Polyimide resin-fiberglass cloth laminates for printed circuit boards  
[NASA-CASE-MFS-20408] c 18 N72-12604

Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c 37 N74-18126

Method of laminating structural members  
[NASA-CASE-XLA-11028-1] c 24 N74-27035

Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260

Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230

Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170

Hybrid composite laminate structures  
[NASA-CASE-LEW-12118-1] c 24 N77-27188

Honeycomb-laminate composite structure  
[NASA-CASE-ARC-10913-1] c 24 N78-15180

Composite lamination method  
[NASA-CASE-LAR-12019-1] c 24 N78-17150

Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c 33 N79-12331

Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c 24 N81-17170

Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179

Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235

Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384

Method of tracing contour patterns for use in making gradual contour resin matrix composites  
[NASA-CASE-ARC-11246-1] c 31 N83-34073

Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796

Improved impact tolerant material  
[NASA-CASE-LAR-12887-1] c 24 N84-20649

Fire and heat resistant laminating resins based on maleimide and citraconimide substituted 1-(diorgano oxyphosphonyl)methyl-2,4- and 2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-1] c 27 N85-21364

High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561

Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416

## LANDFORMS

Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c 43 N81-17499

## LANDING AIDS

Altitude sensing device  
[NASA-CASE-XMS-01994-1] c 14 N72-17326  
Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619  
Full color hybrid display for aircraft simulators --- landing aids  
[NASA-CASE-ARC-10903-1] c 09 N78-18083

## LANDING GEAR

Pivotal shock absorbing pad assembly Patent  
[NASA-CASE-XMF-03856] c 31 N70-34159  
Nose gear steering system for vehicle with main skids Patent  
[NASA-CASE-XLA-01804] c 02 N70-34160  
Landing pad assembly for aerospace vehicles Patent  
[NASA-CASE-XMF-02853] c 31 N70-36654  
Aircraft wheel spray drag alleviator Patent  
[NASA-CASE-XLA-01583] c 02 N70-36825  
Space craft soft landing system Patent  
[NASA-CASE-XMF-02108] c 31 N70-36845  
Double-acting shock absorber Patent  
[NASA-CASE-XMF-01045] c 15 N70-40354  
Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589  
Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c 37 N81-24443

## LANDING MODULES

Double-acting shock absorber Patent  
[NASA-CASE-XMF-01045] c 15 N70-40354

## LANDING SIMULATION

Impact simulator Patent  
[NASA-CASE-XLA-00493] c 11 N70-34786

## LANTHANUM COMPOUNDS

Stabilized lanthanum sulphur compounds --- thermoelectric materials  
[NASA-CASE-NPO-16135-1] c 25 N83-24572

## LARGE SCALE INTEGRATION

Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345  
Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N85-20250

## LARGE SPACE STRUCTURES

Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c 31 N81-27323  
Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895  
Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336  
Deployable geodesic truss structure A01  
[NASA-CASE-LAR-13113-1] c 31 N86-24867  
Measurement apparatus and procedure for the determination of surface emissivities  
[NASA-CASE-LAR-13455-1] c 32 N86-24880  
Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789  
Latching mechanism for deployable/re-stowable columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791  
Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N86-31630

## LASER ALTIMETERS

Sidelooking laser altimeter for a flight simulator  
[NASA-CASE-ARC-11312-1] c 36 N83-34304

## LASER APPLICATIONS

High power laser apparatus and system  
[NASA-CASE-XLE-2529-2] c 36 N75-27364  
Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N76-24553  
Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753  
Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c 36 N77-25501  
Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c 36 N77-25502  
Laser extensometer  
[NASA-CASE-MFS-19259-1] c 36 N78-14380  
Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148  
Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c 36 N79-18307  
Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978

Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680

High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N84-16986  
Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631  
Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639  
Laser Schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N85-30932  
Laser activated MTOS microwave device  
[NASA-CASE-NPO-16112-1] c 33 N86-19516  
Multiplex electric discharge gas laser system  
[NASA-CASE-NPO-16433-1] c 36 N86-20778  
Discharge cell for optogalvanic spectroscopy having orthogonal relationship between the probe laser and discharge axis  
[NASA-CASE-NPO-16271-1] c 35 N86-25753

## LASER CAVITIES

Laser apparatus  
[NASA-CASE-GSC-12237-1] c 36 N80-14384  
Laser Resonator  
[NASA-CASE-GSC-12565-1] c 36 N84-14509  
Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204

## LASER DOPPLER VELOCIMETERS

Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c 35 N75-16783  
Combined dual scatter, local oscillator laser Doppler velocimeter  
[NASA-CASE-ARC-10642-1] c 36 N76-14447  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493  
Pseudo-backscatter laser Doppler velocimeter employing antiparallel-reflector in the forward direction  
[NASA-CASE-ARC-10970-1] c 36 N77-25501  
Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c 74 N78-17866  
Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c 35 N79-14349  
Laser Doppler velocity simulator --- to induce frequency shift  
[NASA-CASE-LAR-12176-1] c 36 N80-16321  
Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c 36 N81-24422  
Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712  
Powder fed sheared dispersal particle generator  
[NASA-CASE-LAR-12785-1] c 37 N84-16561  
Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N84-25015  
Projection lens scanning laser velocimeter system  
[NASA-CASE-ARC-11547-1] c 36 N85-20320  
Vibration-free Raman Doppler velocimeter  
[NASA-CASE-LAR-13268-1] c 35 N85-29216  
LDV multiplexer interface  
[NASA-CASE-ARC-11536-1] c 33 N85-30202  
Auto covariance computer  
[NASA-CASE-LAR-12968-1] c 60 N86-21154  
Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N86-24978  
Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697

## LASER DRILLING

In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452

## LASER FUSION

Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996

## LASER GUIDANCE

Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712

## LASER GYROSCOPES

Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448  
Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037

## LASER HEATING

Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524  
Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c 71 N81-15767

## LASER INTERFEROMETRY

Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949

## LASER MATERIALS

Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c 36 N75-19655  
Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542  
Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-1SB] c 25 N86-32540

## LASER MODE LOCKING

Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653  
Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654  
Length controlled stabilized mode-lock Nd:YAG laser  
[NASA-CASE-GSC-11571-1] c 36 N77-25499  
Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681

## LASER MODES

Optical pump and driver system for lasers  
[NASA-CASE-ERC-10283] c 16 N72-25485  
Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c 36 N75-31427

## LASER OUTPUTS

Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343  
Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-19212  
Amplitude modulated laser transmitter Patent  
[NASA-CASE-XMS-04269] c 16 N71-22895  
Laser fluid velocity detector Patent  
[NASA-CASE-XAC-10770-1] c 16 N71-24828  
Laser calibrator Patent  
[NASA-CASE-XLA-03410] c 16 N71-25914  
Method and apparatus for optical modulating a light signal Patent  
[NASA-CASE-GSC-10216-1] c 23 N71-26722  
Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135  
Optical frequency waveguide and transmission system Patent  
[NASA-CASE-HQN-10541-4] c 16 N71-27183  
Laser communication system for controlling several functions at a location remote to the laser  
[NASA-CASE-LAR-10311-1] c 16 N73-16536  
Power supply for carbon dioxide lasers  
[NASA-CASE-GSC-11222-1] c 16 N73-32391  
Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c 36 N74-13205  
Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009  
Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028  
Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654  
Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c 36 N75-19655  
Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c 36 N75-31427  
Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MSC-12640-1] c 74 N76-31998  
Length controlled stabilized mode-lock Nd:YAG laser  
[NASA-CASE-GSC-11571-1] c 36 N77-25499  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c 25 N77-32255  
Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510  
High power metallic halide laser --- amplifying a copper chloride laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616  
Collimated beam manifold with the number of output beams variable at a given output angle  
[NASA-CASE-MFS-25312-1] c 74 N83-17305  
Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c 35 N84-22929  
Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944  
Projection lens scanning laser velocimeter system  
[NASA-CASE-ARC-11547-1] c 36 N85-20320  
Magnetically switched power supply systems for lasers  
[NASA-CASE-NPO-16402-1] c 36 N85-29265

- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- Multiplex electric discharge gas laser system  
[NASA-CASE-NPO-16433-1] c 36 N86-20778
- LASER PLASMAS**  
Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c 36 N77-19416
- LASER PUMPING**  
Laser apparatus  
[NASA-CASE-GSC-12237-1] c 36 N80-14384  
Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415  
Solar pumped laser  
[NASA-CASE-LAR-12870-1] c 36 N84-16542
- LASER RANGE FINDERS**  
Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c 36 N82-16396  
Optical distance measuring instrument  
[US-PATENT-APPL-SN-406820] c 74 N83-13982  
Laser ranging and video display system  
[NASA-CASE-MSC-20870-1] c 36 N86-24977
- LASER RANGER/TRACKER**  
Method and apparatus for aligning a laser beam projector  
Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125
- LASER SPECTROMETERS**  
Method and apparatus for enhancing laser absorption sensitivity  
[NASA-CASE-NPO-16567-1-CU] c 36 N86-20777
- LASER SPECTROSCOPY**  
Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159
- LASER WINDOWS**  
Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c 74 N78-17866
- LASERS**  
Laser apparatus for removing material from rotating objects Patent  
[NASA-CASE-MFS-11279] c 16 N71-20400  
Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c 16 N71-24170  
Optical frequency waveguide Patent  
[NASA-CASE-HQN-10541-1] c 07 N71-26291  
Laser camera and diffusion filter therefore Patent  
[NASA-CASE-NPO-10417] c 16 N71-33410  
Optical probing of supersonic flows with statistical correlation  
[NASA-CASE-MFS-20642] c 14 N72-21407  
A technique for breaking ice in the path of a ship  
[NASA-CASE-LAR-10815-1] c 16 N72-22520  
Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397  
Tunable cavity resonator with ramp shaped supports  
[NASA-CASE-HQN-10790-1] c 36 N74-11313  
Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c 36 N74-15145  
Long range laser traversing system  
[NASA-CASE-GSC-11262-1] c 36 N74-21091  
Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c 36 N75-19652  
Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653  
Acoustically controlled distributed feedback laser  
[NASA-CASE-NPO-13175-1] c 36 N75-31427  
Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575  
Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N76-30053  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942  
Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346  
Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c 73 N78-32848  
Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549  
Method of and apparatus for double-exposure holographic interferometry  
[NASA-CASE-MFS-25405-1] c 35 N84-22929  
Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944
- Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065  
Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N86-20780
- LASING**  
Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204
- LATCHES**  
Despin weight release Patent  
[NASA-CASE-XLA-00679] c 15 N70-38601  
Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190  
Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c 15 N71-17649  
Latching mechanism Patent  
[NASA-CASE-XMS-03745] c 15 N71-21076  
Latch/ejector unit Patent  
[NASA-CASE-XLA-03538] c 15 N71-24897  
Latching mechanism Patent  
[NASA-CASE-MSC-15474-1] c 15 N71-26162  
Latch mechanism  
[NASA-CASE-MSC-12549-1] c 37 N74-27903  
Latching device  
[NASA-CASE-MFS-21606-1] c 37 N75-19685  
Load regulating latch  
[NASA-CASE-MSC-19535-1] c 37 N77-32499  
Helmet latching and attaching ring  
[NASA-CASE-XMS-04670] c 54 N78-17678  
Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c 33 N82-11357  
CAM controlled retractable door latch  
[NASA-CASE-MSC-20304-1] c 37 N82-31690  
Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c 37 N82-32732  
Self-indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N84-20860  
Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991  
Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N86-19613  
Latching mechanism for deployable/re-stowable columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791
- LATERAL CONTROL**  
Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581  
Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c 21 N70-41856  
High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088  
Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c 08 N79-14108  
Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985  
Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N86-24700
- LATERAL STABILITY**  
Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277
- LATEX**  
Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261  
Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242
- LATHES**  
Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-22722  
Lathe tool bit and holder for machining fiberglass materials  
[NASA-CASE-XLA-10470] c 15 N72-21489
- LAUNCH ESCAPE SYSTEMS**  
Emergency escape system Patent  
[NASA-CASE-XKS-02342] c 05 N71-11199  
Device for separating occupant from an ejection seat Patent  
[NASA-CASE-XMS-04625] c 05 N71-20718
- LAUNCH VEHICLE CONFIGURATIONS**  
Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c 09 N77-19076
- LAUNCH VEHICLES**  
A support technique for vertically oriented launch vehicles  
[NASA-CASE-XLA-02704] c 11 N69-21540  
Method and apparatus for detection and location of microleaks Patent  
[NASA-CASE-XMF-02307] c 14 N71-10779  
Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787
- LAUNCHERS**  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- LAUNCHING PADS**  
Missile launch release system Patent  
[NASA-CASE-XMF-03198] c 30 N70-40353  
Remote controlled tubular disconnect Patent  
[NASA-CASE-XLA-01396] c 03 N71-12259  
Validation device for spacecraft checkout equipment Patent  
[NASA-CASE-XKS-10543] c 07 N71-26292
- LAY-UP**  
Method of making a partial interlaminar separation composite system  
[NASA-CASE-LAR-12065-2] c 24 N81-33235
- LAYERS**  
Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c 28 N78-24365
- LEACHING**  
Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471
- LEAD (METAL)**  
Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524  
Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338
- LEAD SULFIDES**  
Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N83-13360
- LEAD TELLURIDES**  
Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786  
Segmenting lead telluride-silicon germanium thermoelements Patent  
[NASA-CASE-XGS-05718] c 26 N71-16037
- LEADING EDGE FLAPS**  
Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAR-12750-1] c 02 N81-19016  
Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985
- LEADING EDGES**  
Reentry vehicle leading edge Patent  
[NASA-CASE-XLA-00165] c 31 N70-33242  
Leading edge curvature based on convective heating Patent  
[NASA-CASE-XLA-01486] c 01 N71-23497  
Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170  
Pumped vortex  
[NASA-CASE-LAR-12625-1] c 02 N83-19715  
Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N84-12092
- LEAKAGE**  
Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503  
Method and apparatus for detection and location of microleaks Patent  
[NASA-CASE-XMF-02307] c 14 N71-10779  
Leak detector Patent  
[NASA-CASE-LAR-10323-1] c 12 N71-17573  
Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161  
Method for leakage testing of tanks Patent  
[NASA-CASE-XMF-02392] c 32 N71-24285  
Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896  
Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910  
Method and apparatus for detecting gross leaks Patent  
[NASA-CASE-ERC-10033] c 14 N71-26672  
Orifice gross leak tester Patent  
[NASA-CASE-LEW-10150] c 14 N71-28992  
Leak detector  
[NASA-CASE-MFS-21761-1] c 35 N75-15931  
Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612  
Low heat leak connector for cryogenic system  
[NASA-CASE-XLE-02367-1] c 31 N79-21225  
Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597

Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631

Fluid leak indicator  
[NASA-CASE-MSC-20783-1] c 35 N86-20756

Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N86-21859

Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736

**LEG (ANATOMY)**

Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735

Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c 54 N77-30749

Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c 52 N78-10686

Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112

**LENS DESIGN**

Chromatically corrected virtual image display --- lens design for flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N79-14892

**LENSES**

High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c 14 N71-15622

Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474

Petzval type objective including field shaping lens Patent  
[NASA-CASE-GSC-10700] c 23 N71-30027

Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence  
[NASA-CASE-GSC-11133-1] c 23 N72-11568

Plural beam antenna  
[NASA-CASE-GSC-11013-1] c 09 N73-19234

Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c 36 N77-32478

Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854

Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185

Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072

Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712

Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577

Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N86-24978

**LENTICULAR BODIES**

Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924

**LEVEL (HORIZONTAL)**

Hot wire liquid level detector for cryogenic fluids Patent  
[NASA-CASE-XLE-00454] c 23 N71-17802

Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425

**LEVEL (QUANTITY)**

Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c 14 N71-21007

Positive dc to positive dc converter Patent  
[NASA-CASE-XMF-14301] c 09 N71-23188

**LEVELING**

Adjustable attitude guide device Patent  
[NASA-CASE-XLA-07911] c 15 N71-15571

Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610

Adjustable support  
[NASA-CASE-NPO-10721] c 15 N72-27484

Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c 09 N75-12968

**LEVITATION**

Gas levitator having fixed levitation node for containerless processing  
[NASA-CASE-MFS-25509-1] c 35 N83-24828

Closed loop electrostatic levitation system  
[NASA-CASE-NPO-15553-1] c 33 N85-29142

**LEVITATION MELTING**

High temperature acoustic levitator  
[NASA-CASE-NPO-16022-1] c 71 N85-22105

**LIFE (DURABILITY)**

Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c 37 N74-21064

Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888

Improved heat exchanger for electrothermal devices  
[NASA-CASE-LEW-14037-1] c 20 N84-32425

Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913

Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-163371-1] c 33 N85-20251

**LIFE DETECTORS**

Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487

Lyophilized reaction mixtures Patent  
[NASA-CASE-XGS-05532] c 06 N71-17705

**LIFE RAFTS**

Life raft Patent  
[NASA-CASE-XMS-00863] c 05 N70-34857

Life raft stabilizer  
[NASA-CASE-MSC-12393-1] c 02 N73-26006

Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c 54 N74-14845

**LIFE SUPPORT SYSTEMS**

Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152

Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203

Extravehicular tunnel suit system Patent  
[NASA-CASE-MSC-12243-1] c 05 N71-24728

Foreshortened convolute section for a pressurized suit Patent  
[NASA-CASE-XMS-09637-1] c 05 N71-24730

Orbital escape device Patent  
[NASA-CASE-XMS-06162] c 31 N71-28851

Specialized halogen generator for purification of water Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933

Life support system  
[NASA-CASE-MSC-12411-1] c 05 N72-20096

Air removal device  
[NASA-CASE-XLA-8914] c 15 N73-12492

Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012

Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c 25 N74-12813

Helmet feedport  
[NASA-CASE-XMS-09653] c 54 N78-17680

Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721

Air removal device --- life support systems  
[NASA-CASE-XLA-8914-2] c 25 N82-21269

**LIFT**

Pumped vortex  
[NASA-CASE-LAR-12625-1] c 02 N83-19715

**LIFT DEVICES**

Device for handling heavy loads  
[NASA-CASE-XNP-04969] c 11 N69-27466

Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176

Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110

Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257

High lift aircraft --- with improved stability, control, performance, and noise characteristics  
[NASA-CASE-LAR-11252-1] c 05 N75-25914

Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c 20 N76-22296

Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c 08 N79-14108

**LIFT DRAG RATIO**

Ring wing tension vehicle Patent  
[NASA-CASE-XLA-04901] c 31 N71-24315

Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277

Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551

**LIFTING BODIES**

Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176

Lifting body Patent Application  
[NASA-CASE-FRC-10063] c 01 N71-12217

Lift balancing device  
[NASA-CASE-LAR-10348-1] c 11 N73-12264

**LIFTING REENTRY VEHICLES**

Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924

Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c 31 N71-15674

Flight craft Patent  
[NASA-CASE-XMC-02058] c 02 N71-16087

**LIGANDS**

Carboranyl-methylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750

**LIGHT (VISIBLE RADIATION)**

Anti-glare improvement for optical imaging systems Patent  
[NASA-CASE-NPO-10337] c 14 N71-15604

Maksutov spectrograph Patent  
[NASA-CASE-XLA-10402] c 14 N71-29041

Combustion detector  
[NASA-CASE-LAR-10739-1] c 14 N73-16484

Optical fiber tactile sensor  
[NASA-CASE-NPO-15375-1] c 74 N84-11921

Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750

**LIGHT AIRCRAFT**

Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110

**LIGHT BEAMS**

Spectroscopy equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206

Optical communications system Patent  
[NASA-CASE-XLA-01090] c 16 N71-28963

Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131

Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978

Collimated beam manifold with the number of output beams variable at a given output angle  
[NASA-CASE-MFS-25312-1] c 74 N83-17305

Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N85-28951

Laser Schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N85-30932

Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629

**LIGHT EMITTING DIODES**

Photoelectric detection system --- manufacturing automation  
[NASA-CASE-MFS-23776-1] c 33 N82-28545

Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733

Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139

Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N86-20780

**LIGHT GAS GUNS**

Hypervelocity gun Patent  
[NASA-CASE-XSC-05902] c 11 N71-18578

**LIGHT MODULATION**

Retrodirectional modulator Patent  
[NASA-CASE-GSC-10062] c 14 N71-15605

Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479

Method and apparatus for optical modulating a light signal Patent  
[NASA-CASE-GSC-10216-1] c 23 N71-26722

Optical communications system Patent  
[NASA-CASE-XLA-01090] c 16 N71-28963

Lamp modulator  
[NASA-CASE-KSC-10565] c 09 N72-25250

Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N76-30053

Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510

Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c 74 N81-24900

**LIGHT SCATTERING**

The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874

**LIGHT SCATTERING METERS**

System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865

**LIGHT SOURCES**

Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331

High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c 09 N70-33312

Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089

Light position locating system Patent  
[NASA-CASE-XNP-01059] c 23 N71-21821

Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c 14 N72-17323

Ultrastable calibrated light source  
[NASA-CASE-MSC-12293-1] c 14 N72-27411

Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214

Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c 14 N73-25463



- Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089  
Very high intensity light source using a cathode ray tube  
--- electron beams  
[NASA-CASE-XNP-01296] c 33 N75-27250  
Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318  
Uniform variable light source  
[NASA-CASE-NPO-11429-1] c 74 N77-21941
- LIGHT TRANSMISSION**  
Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c 16 N71-15565  
Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365  
Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175  
Solar cell panels with light transmitting plate  
[NASA-CASE-NPO-10747] c 03 N72-22042  
Optical frequency waveguide and transmission system  
[NASA-CASE-HQN-10541-3] c 23 N72-23695  
Light regulator  
[NASA-CASE-LAR-10836-1] c 26 N72-27784  
Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c 70 N74-13436  
Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c 74 N77-22950  
Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879  
Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072  
Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- LIGHT VALVES**  
Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826  
Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647
- LIGHTING EQUIPMENT**  
Internal work light Patent  
[NASA-CASE-XKS-05932] c 09 N71-26787  
Pressurized lighting system  
[NASA-CASE-KSC-10644] c 09 N72-27227  
Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315
- LIGHTNING**  
Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175  
Lightning tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110  
Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c 14 N73-32319  
Lightning current measuring systems  
[NASA-CASE-KSC-10807-1] c 33 N75-26246  
Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337  
Lightning current detector  
[NASA-CASE-KSC-11057-1] c 33 N79-14305  
Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779  
Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N86-26296
- LIMBS (ANATOMY)**  
Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772  
Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c 52 N83-27578
- LIMITER CIRCUITS**  
Variable duration pulse integrator Patent  
[NASA-CASE-XLA-01219] c 10 N71-23084  
Noise limiter Patent  
[NASA-CASE-NPO-10169] c 10 N71-24844  
Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895  
Low level signal limiter  
[NASA-CASE-XLE-04791] c 32 N74-22096  
Inrush current limiter  
[NASA-CASE-GSC-11789-1] c 33 N77-14333
- LINE SPECTRA**  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015  
Optical scanner  
[NASA-CASE-GSC-12897-1] c 74 N84-25450
- LINEAR ACCELERATORS**  
Linear accelerator frequency control system Patent  
[NASA-CASE-XGS-05441] c 10 N71-22962
- LINEAR ARRAYS**  
Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288  
Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N86-20780
- LINEAR CIRCUITS**  
Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N86-20679
- LINEAR INTEGRATED CIRCUITS**  
Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590
- LINEAR POLARIZATION**  
Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647
- LINEAR PROGRAMMING**  
Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N86-20679
- LINEAR RECEIVERS**  
Antenna array at focal plane of reflector with coupling network for beam switching Patent  
[NASA-CASE-GSC-10220-1] c 07 N71-27233
- LINEAR SYSTEMS**  
Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c 08 N71-12503  
A m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c 10 N73-20254  
Linear magnetic bearings  
[NASA-CASE-GSC-12582-2] c 37 N85-20337
- LINEARITY**  
Semi-linear ball bearing Patent  
[NASA-CASE-XLA-02809] c 15 N71-22982  
Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c 15 N71-24045  
Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067  
Linear motion valve  
[NASA-CASE-MSC-20148-1] c 37 N85-29284  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-2] c 35 N85-34373  
Universal clamp  
[NASA-CASE-MSC-20549-1] c 37 N86-19812  
Ferroresonant regulated power supply  
[NASA-CASE-NPO-15977-1-CU] c 33 N86-20673  
Linearized traveling wave amplifier with hard limiter characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742  
Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N86-25478
- LININGS**  
Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453  
Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N83-17628  
Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577
- LINKAGES**  
Collapsible nozzle extension for rocket engines Patent  
[NASA-CASE-MFS-11497] c 28 N71-16224  
Adjustable force probe  
[NASA-CASE-MFS-20760] c 14 N72-33377  
Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382  
Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c 05 N81-19087  
Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N86-19613
- LIQUEFACTION**  
Ophthalmic liquefaction pump  
[NASA-CASE-LEW-12051-1] c 52 N75-33640
- LIQUID ATOMIZATION**  
Constant-output atomizer --- Inhalation therapy and aerosol research  
[NASA-CASE-MFS-25631-1] c 34 N84-12406
- LIQUID BEARINGS**  
High speed hybrid bearing comprising a fluid bearing and a rolling bearing convected in series  
[NASA-CASE-LEW-11152-1] c 15 N73-32359
- LIQUID CHROMATOGRAPHY**  
Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431
- LIQUID COOLING**  
Water cooled contactor for anode in carbon arc mechanism  
[NASA-CASE-XMS-03700] c 15 N69-24266  
External liquid-spray cooling of turbine blades Patent  
[NASA-CASE-XLE-00037] c 28 N70-33372  
Solenoid construction Patent  
[NASA-CASE-XNP-01951] c 09 N70-41929  
Laminar flow enhancement Patent  
[NASA-CASE-NPO-10122] c 12 N71-17631
- Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439  
Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114-2] c 09 N71-24807  
Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114] c 33 N71-27862  
Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c 33 N71-29152  
Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c 05 N72-15098  
Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071  
Heat exchanger system and method  
[NASA-CASE-LAR-10799-2] c 34 N76-17317  
Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736  
Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c 31 N78-17237  
Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214
- LIQUID CRYSTALS**  
Angular velocity and acceleration measuring apparatus  
[NASA-CASE-ERC-10292] c 14 N72-25410  
Electricity measurement devices employing liquid crystalline materials  
[NASA-CASE-ERC-10275] c 26 N72-25680  
Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826
- LIQUID FILLED SHELLS**  
Liquid rocket system Patent  
[NASA-CASE-XNP-00610] c 28 N70-36910  
Fluid sample collector Patent  
[NASA-CASE-XMS-06767-1] c 14 N71-20435  
Fluid containers and resealable septum therefor Patent  
[NASA-CASE-NPO-10123] c 15 N71-24835  
Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265
- LIQUID FLOW**  
Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02824] c 12 N89-39988  
Liquid junction and method of fabricating the same Patent Application  
[NASA-CASE-NPO-10682] c 15 N70-34699  
Valve actuator Patent  
[NASA-CASE-XHQ-01208] c 15 N70-35409  
Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492  
Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c 14 N70-41994  
Liquid flow sight assembly Patent  
[NASA-CASE-XLE-02998] c 14 N70-42074  
Ablative system  
[NASA-CASE-LEW-10359-2] c 33 N73-25952  
Zero gravity liquid transfer screen  
[NASA-CASE-KSC-10626] c 14 N73-27378  
System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c 34 N76-27517  
Degassing and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MSC-18936-1] c 35 N83-29652  
Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930
- LIQUID HELIUM**  
Heat operated cryogenic electrical generator  
[NASA-CASE-NPO-13303-1] c 20 N75-24837  
Helium refrigerator  
[NASA-CASE-NPO-13435-1] c 31 N76-14284  
Cryostat system for temperatures on the order of 2 deg K or less  
[NASA-CASE-NPO-13459-1] c 31 N77-10229  
Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c 31 N78-25256  
Stabilization of He<sub>2</sub>(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826  
Low cost cryostat  
[NASA-CASE-NPO-14513-1] c 35 N81-14287
- LIQUID HYDROGEN**  
Cryogenic thermal insulation Patent  
[NASA-CASE-XMF-05046] c 33 N71-28892  
Reinforced polyquinoxaline gasket and method of preparing the same --- resistant to ionizing radiation and liquid hydrogen temperatures  
[NASA-CASE-MFS-21364-1] c 37 N74-18126  
Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-1] c 28 N84-29017  
Ten degree Kelvin hydride refrigerator  
[NASA-CASE-NPO-16393-1-CU] c 31 N85-29084



Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N86-23744

**LIQUID INJECTION**

Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c 28 N70-34294  
Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c 21 N71-15582  
Injector assembly for liquid fueled rocket engines  
Patent  
[NASA-CASE-XMF-00968] c 28 N71-15660  
Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c 37 N80-10494  
Method of producing silicon --- gas phase reactor  
multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c 31 N80-18231  
Vortex generating flow passage design for increased  
film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433

**LIQUID LASERS**

Method and apparatus for wavelength tuning of liquid  
lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343

**LIQUID LEVELS**

Inductive liquid level detection system Patent  
[NASA-CASE-XLE-01609] c 14 N71-10500  
Apparatus for fiber optic liquid level sensing  
[NASA-CASE-MSC-18674-1] c 74 N81-24907

**LIQUID METALS**

Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983  
Two-fluid magnetohydrodynamic system and method for  
thermal-electric power conversion Patent  
[NASA-CASE-XNP-00644] c 03 N70-36803  
Analytical test apparatus and method for determining  
oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527  
Power system with heat pipe liquid coolant lines  
Patent  
[NASA-CASE-MFS-14114] c 33 N71-27862  
Fluid impervious barrier including liquid metal alloy and  
method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747  
Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c 33 N72-20915  
Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129  
Electromagnetic flow rate meter --- for liquid metals  
[NASA-CASE-LEW-10981-1] c 35 N74-21018  
Process for preparing liquid metal electrical contact  
device  
[NASA-CASE-LEW-11978-1] c 33 N77-26385  
Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573  
Arc spray fabrication of metal matrix composite  
monotape  
[NASA-CASE-LEW-13828-1] c 24 N85-30027

**LIQUID NITROGEN**

Cryogenic feedthrough  
[NASA-CASE-LAR-10031] c 15 N72-22484

**LIQUID OXYGEN**

Dye penetrant for surfaces subsequently contacted by  
liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170  
Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1-CU] c 31 N86-27467

**LIQUID PHASES**

Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635  
Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975  
Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199  
Cryogenic liquid sensor  
[NASA-CASE-NPO-10619-1] c 35 N77-21393  
Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N86-20721

**LIQUID PROPELLANT ROCKET ENGINES**

Annular rocket motor and nozzle configuration Patent  
[NASA-CASE-XLE-00078] c 28 N70-33284  
Attitude and propellant flow control system and method  
Patent  
[NASA-CASE-XMF-00185] c 21 N70-34539  
Injector for bipropellant rocket engines Patent  
[NASA-CASE-XMF-00148] c 28 N70-38710  
Zero gravity starting means for liquid propellant motors  
Patent  
[NASA-CASE-XNP-01390] c 28 N70-41275  
Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502  
Space vehicle  
[NASA-CASE-MFS-22734-1] c 18 N75-19329  
Fluid thrust control system --- for liquid propellant rocket  
engines  
[NASA-CASE-XMF-05964-1] c 20 N79-21124  
Rocket injector head  
[NASA-CASE-XMF-04592-1] c 20 N79-21125

Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314  
Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFG-25989-1] c 20 N85-20008

**LIQUID ROCKET PROPELLANTS**

Rocket propellant injector Patent  
[NASA-CASE-XLE-00103] c 28 N70-33241  
Liquid rocket system Patent  
[NASA-CASE-XNP-00610] c 28 N70-36910  
Rocket motor system Patent  
[NASA-CASE-XLE-00323] c 28 N70-38505  
High temperature spark plug Patent  
[NASA-CASE-XLE-00660] c 28 N70-39925  
High pressure filter Patent  
[NASA-CASE-XNP-00732] c 28 N70-41447  
Liquid storage tank venting device for zero gravity  
environment Patent  
[NASA-CASE-XLE-01449] c 15 N70-41646  
Tank construction for space vehicles Patent  
[NASA-CASE-XMF-01899] c 31 N70-41948  
Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635  
Control valve and co-axial variable injector Patent  
[NASA-CASE-XNP-09702] c 15 N71-17654  
Slosh alleviator Patent  
[NASA-CASE-XLA-05749] c 15 N71-19569  
Filler valve Patent  
[NASA-CASE-XNP-01747] c 15 N71-23024  
Propellant mass distribution metering apparatus  
Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339  
Fluid impervious barrier including liquid metal alloy and  
method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747  
Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c 14 N71-29134  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278  
Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c 20 N80-14188  
Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-1] c 28 N84-29017

**LIQUID SLOSHING**

Slosh suppressing device and method Patent  
[NASA-CASE-XMF-00658] c 12 N70-38997  
Flexible ring slosh damping baffle Patent  
[NASA-CASE-LAR-10317-1] c 32 N71-16103  
Buoyant anti-slosh system Patent  
[NASA-CASE-XLA-04605] c 32 N71-16106  
Hot wire liquid level detector for cryogenic fluids  
Patent  
[NASA-CASE-XLE-00454] c 23 N71-17802  
Slosh alleviator Patent  
[NASA-CASE-XLA-05749] c 15 N71-19569  
Instrument for measuring the dynamic behavior of liquids  
Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387

**LIQUID SODIUM**

Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c 37 N80-10494

**LIQUID-GAS MIXTURES**

Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c 15 N70-40062  
Liquid-gas separator for zero gravity environment  
Patent  
[NASA-CASE-XMS-01492] c 05 N70-41297  
Liquid storage tank venting device for zero gravity  
environment Patent  
[NASA-CASE-XLE-01449] c 15 N70-41646  
Separator Patent  
[NASA-CASE-XLA-00415] c 15 N71-16079  
Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023  
Air removal device --- life support systems  
[NASA-CASE-XLA-8914-2] c 25 N82-21269

**LIQUID-VAPOR INTERFACES**

Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c 15 N71-15968  
Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294  
Response analyzers for sensors Patent  
[NASA-CASE-MFS-11204] c 14 N71-29134  
Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781

**LIQUIDS**

Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c 15 N70-40062  
Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610  
Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184  
Apparatus for detecting the amount of material in a  
resonant cavity container Patent  
[NASA-CASE-XNP-02500] c 18 N71-27397  
Resonant infrasonic gauging apparatus  
[NASA-CASE-MSC-11847-1] c 14 N72-11363

**Ablative system**

[NASA-CASE-LEW-10359] c 33 N72-25911  
Liquid waste feed system  
[NASA-CASE-LAR-10365-1] c 05 N72-27102  
Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c 15 N73-19458  
Bimetallic fluid displacement apparatus --- for stirring  
and heating stored gases and liquids  
[NASA-CASE-ARC-10441-1] c 35 N74-15126  
Method and device for detection of surface  
discontinuities or defects  
[NASA-CASE-MSC-14187-1] c 35 N74-32879  
Automatic liquid inventory collecting and dispensing  
unit  
[NASA-CASE-LAR-11071-1] c 35 N75-19611  
Thermal energy storage system --- operating on  
superheating of liquids  
[NASA-CASE-MFS-23167-1] c 44 N76-31667  
Low gravity phase separator  
[NASA-CASE-MSC-14773-1] c 35 N78-12390  
Automatic fluid dispenser  
[NASA-CASE-ARC-10820-1] c 35 N78-19466  
Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572  
System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N83-31993

**LITHIUM**

Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N85-20535  
Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875

**LITHIUM COMPOUNDS**

Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029

**LITHIUM SULFUR BATTERIES**

Cathode for primary battery  
[NASA-CASE-NPO-16397-1-CU] c 33 N86-19517

**LOAD DISTRIBUTION (FORCES)**

Force measuring instrument Patent  
[NASA-CASE-XMF-00456] c 14 N70-34705  
Multiple Belleville spring assembly Patent  
[NASA-CASE-XNP-00840] c 15 N70-38225  
Device for use in loading tension members ---  
characterized by elongated elastic body  
[NASA-CASE-MFS-21488-1] c 14 N75-24794  
Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c 37 N75-32465  
Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629

**LOAD TESTING MACHINES**

Load cell protection device Patent  
[NASA-CASE-XMS-06782] c 32 N71-15974  
Load relieving device Patent  
[NASA-CASE-XMS-06329-1] c 15 N71-20441  
Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c 35 N76-18400  
Fatigue failure load indicator  
[NASA-CASE-LAR-12027-1] c 39 N79-22537  
Portable 90 degree proof loading device  
[NASA-CASE-MSC-20250-1] c 35 N86-19581  
Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841

**LOAD TESTS**

Differential pressure cell Patent  
[NASA-CASE-XAC-00042] c 14 N70-34816  
Fatigue testing a plurality of test specimens and  
method  
[NASA-CASE-MFS-28118-1] c 39 N86-32770

**LOADING OPERATIONS**

Air bearing Patent  
[NASA-CASE-XMF-01887] c 15 N71-10617  
Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722

**LOADS (FORCES)**

Device for handling heavy loads  
[NASA-CASE-XNP-04969] c 11 N69-27466  
Two-plane balance Patent  
[NASA-CASE-XAC-00073] c 14 N70-34813  
Method of improving the reliability of a rolling element  
system Patent  
[NASA-CASE-XLE-02999] c 15 N71-16052  
Load relieving device Patent  
[NASA-CASE-XMS-06329-1] c 15 N71-20441  
Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191  
Transverse piezoresistance and pinch effect  
electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490  
Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c 10 N71-26531  
Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c 10 N71-27136  
Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432  
Energy absorption device Patent  
[NASA-CASE-XNP-01848] c 15 N71-28959

- Air bearing  
[NASA-CASE-WLP-10002] c 15 N72-17451
- Device for measuring bearing preload  
[NASA-CASE-MFS-20434] c 11 N72-25288
- Variable direction force coupler  
[NASA-CASE-MFS-20317] c 15 N73-13463
- Ergometer  
[NASA-CASE-MFS-21109-1] c 05 N73-27941
- Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c 35 N74-13129
- G-load measuring and indicator apparatus --- for aircraft  
[NASA-CASE-ARC-10806] c 06 N74-27872
- Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c 35 N77-18417
- Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367
- Load regulating latch  
[NASA-CASE-MSC-19535-1] c 37 N77-32499
- Adjustable indicating device for load position  
[NASA-CASE-MFS-28008-1] c 35 N85-20300
- Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947
- Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375
- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N86-19611
- Universal clamp  
[NASA-CASE-MSC-20549-1] c 37 N86-19612
- LOCATES SYSTEM**
- Lightning tracking system  
[NASA-CASE-KSC-10729-1] c 09 N73-32110
- Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c 17 N76-21250
- LOCKING**
- Coupling device  
[NASA-CASE-XMS-07846-1] c 09 N69-21927
- Interlocking wedge joint  
[NASA-CASE-LAR-12729-1] c 37 N82-26676
- Elbow and knee joint for hard space suits and the like  
[NASA-CASE-ARC-11610-1] c 54 N85-20666
- Self-locking mechanical center joint  
[NASA-CASE-LAR-12864-1] c 37 N85-30336
- Variable length strut with longitudinal compliance and locking capability  
[NASA-CASE-MFS-25907-1] c 37 N85-34401
- Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789
- Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619
- LOCKS (FASTENERS)**
- Locking device with rolling detents Patent  
[NASA-CASE-XMF-01371] c 15 N70-41829
- Bearing and gimbal lock mechanism and spiral flex lead module Patent  
[NASA-CASE-GSC-10556-1] c 31 N71-26537
- Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c 28 N71-28928
- Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c 14 N71-28935
- Safety-type locking pin  
[NASA-CASE-MFS-18495] c 15 N72-11385
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c 54 N76-22914
- Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c 33 N81-25299
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661
- High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c 37 N82-24494
- Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c 05 N83-19737
- LOCOMOTION**
- Jet shoes  
[NASA-CASE-XLA-08491] c 05 N69-21380
- Training vehicle for controlling attitude Patent  
[NASA-CASE-XMS-02977] c 11 N71-10746
- Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119
- Kinesimetric method and apparatus  
[NASA-CASE-MSC-18929-1] c 39 N83-20280
- LOGARITHMIC RECEIVERS**
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339
- LOGARITHMS**
- Logarithmic function generator utilizing an exponentially varying signal in an inverse manner  
[NASA-CASE-ERC-10267] c 09 N72-23173
- LOGIC CIRCUITS**
- A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148
- Relay binary circuit Patent  
[NASA-CASE-XMF-00421] c 09 N70-34502
- Binary to binary-coded-decimal converter Patent  
[NASA-CASE-XNP-00432] c 08 N70-35423
- Analog-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c 08 N70-40125
- Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494
- Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505
- AC logic flip-flop circuits Patent  
[NASA-CASE-XGS-00823] c 10 N71-15910
- Logic AND gate for fluid circuits Patent  
[NASA-CASE-XLA-07391] c 12 N71-17579
- Ripple add and ripple subtract binary counters Patent  
[NASA-CASE-XGS-04766] c 08 N71-18602
- Exclusive-Or digital logic module Patent  
[NASA-CASE-XLA-07732] c 08 N71-18751
- Stepping motor control circuit Patent  
[NASA-CASE-GSC-10366-1] c 10 N71-18772
- Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650
- BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890
- Current steering switch Patent  
[NASA-CASE-XNP-08567] c 09 N71-26000
- Parallel generation of the check bits of a PN sequence Patent  
[NASA-CASE-XNP-04623] c 10 N71-26103
- Adaptive system and method for signal generation Patent  
[NASA-CASE-GSC-11367] c 10 N71-26374
- Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c 10 N72-22236
- Logical function generator  
[NASA-CASE-XLA-05089] c 09 N73-13209
- A synchronous binary array divider  
[NASA-CASE-ERC-10180-1] c 60 N74-20836
- Four phase logic systems --- including integrated microcircuits  
[NASA-CASE-MSC-14240-1] c 33 N75-14957
- Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342
- Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c 52 N82-11770
- Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953
- Adaptive control system for line-commutated inverters  
[NASA-CASE-MFS-25209-1] c 33 N83-35227
- Nanosequence digital logic controller  
[NASA-CASE-NPO-16116-1] c 60 N84-25306
- Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304
- Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N86-25292
- LONGERONS**
- Deployable geodesic truss structure A01  
[NASA-CASE-LAR-13113-1] c 31 N86-24867
- Latching mechanism for deployable/re-stowable columns useful in satellite construction  
[NASA-CASE-LAR-13169-1] c 37 N86-25791
- Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- LONGITUDINAL CONTROL**
- Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581
- Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c 08 N81-26152
- Remote pivot decoupler pylon: Wing/store suppression  
[NASA-CASE-LAR-13173-1] c 05 N85-19981
- Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N86-24700
- LONGITUDINAL STABILITY**
- Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277
- LOOK ANGLES (ELECTRONICS)**
- Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711
- LOOP ANTENNAS**
- Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMF-00437] c 07 N70-40202
- Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113
- LOOPS**
- Endless tape cartridge Patent  
[NASA-CASE-XGS-00769] c 14 N70-41647
- Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c 07 N71-10609
- Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171
- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c 70 N74-21300
- Means for accommodating large overstrain in lead wires --- by storing extra length of wire in stretchable loop  
[NASA-CASE-LAR-10168-1] c 33 N74-22865
- Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c 34 N79-20336
- Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179
- Pulsed phase locked loop strain monitor --- voltage controlled oscillators  
[NASA-CASE-LAR-12772-1] c 33 N83-16626
- Fluidic momentum controller  
[NASA-CASE-MSC-20906-1] c 18 N86-19344
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N86-20721
- LOUVERS**
- Solar concentrator protective system  
[NASA-CASE-NPO-15662-1] c 44 N84-28204
- LOW ASPECT RATIO**
- Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c 02 N70-33286
- Landing arrangement for aerial vehicle Patent  
[NASA-CASE-XLA-00806] c 02 N70-34858
- LOW COST**
- Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c 44 N76-28635
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c 44 N78-24609
- LOW CURRENTS**
- Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338
- LOW DENSITY MATERIALS**
- Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037
- Mixing insert for foam dispensing apparatus  
[NASA-CASE-MFS-20607-1] c 37 N76-19436
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184
- Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116
- LOW FREQUENCIES**
- Seismic displacement transducer Patent  
[NASA-CASE-XMF-00479] c 14 N70-34794
- Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c 04 N84-27713
- LOW GRAVITY MANUFACTURING**
- Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c 12 N76-15189
- Gas levitator having fixed levitation node for containerless processing  
[NASA-CASE-MFS-25509-1] c 35 N83-24828
- Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650
- Apparatus and furnace for containerless processing of high temperature materials in space  
[NASA-CASE-MFS-28087-1] c 35 N86-23899
- LOW MOLECULAR WEIGHTS**
- Process for preparation of high-molecular-weight polyaryloxysilanes Patent  
[NASA-CASE-XMF-08674] c 06 N71-28807
- LOW NOISE**
- Low phase noise digital frequency divider  
[NASA-CASE-NPO-11569] c 10 N73-26229
- Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c 36 N76-31512
- Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887
- LOW PASS FILTERS**
- Filtering technique based on high-frequency plant modeling for high-gain control  
[NASA-CASE-LAR-12215-1] c 08 N79-23097
- Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c 33 N82-24417

## LOW PRESSURE

Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539

## LOW PRESSURE

Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546  
Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450  
Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFG-25989-1] c 20 N85-20008

## LOW SPEED

Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c 31 N71-15674  
RC rate generator for slow speed measurement Patent  
[NASA-CASE-XMF-02966] c 10 N71-24863

## LOW TEMPERATURE

Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103  
Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N86-32570

## LOW TEMPERATURE ENVIRONMENTS

Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c 03 N72-15986

## LOW TEMPERATURE TESTS

Low temperature flexure fatigue cryostat Patent  
[NASA-CASE-XMF-02964] c 14 N71-17659  
Horizontal cryostat for fatigue testing Patent  
[NASA-CASE-XMF-10968] c 14 N71-24234  
Heating and cooling system --- for fatigue test specimens  
[NASA-CASE-LAR-12393-1] c 34 N83-34221

## LOW THRUST

Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314

## LOW VACUUM

Vibration damping system Patent  
[NASA-CASE-XMS-01620] c 23 N71-15673

## LOW VOLTAGE

High speed low level electrical stepping switch Patent  
[NASA-CASE-XAC-00060] c 09 N70-39915  
Flexible blade antenna Patent  
[NASA-CASE-MSC-12101] c 09 N71-18720  
Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27366

## LOWER BODY NEGATIVE PRESSURE

Method and apparatus for simulating gravitational forces on a living organism  
[NASA-CASE-MSC-20202-1] c 54 N84-16803

## LUBRICANTS

Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-01765] c 18 N71-10772  
Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c 15 N71-24046  
Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098  
Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058  
Journal bearings --- for lubricant films  
[NASA-CASE-LEW-11076-1] c 37 N74-21061  
Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c 31 N83-27058

## LUBRICATING OILS

Foil seal Patent  
[NASA-CASE-XLE-05130-2] c 15 N71-19570

## LUBRICATION

Production of hollow components for rolling element bearings by diffusion welding  
[NASA-CASE-LEW-11026-1] c 15 N73-33383  
Variable resistance constant tension and lubrication device --- using oil-saturated leather wiper  
[NASA-CASE-KSC-10723-1] c 37 N75-13265  
Fluid journal bearings  
[NASA-CASE-LEW-11076-4] c 37 N76-15461

## LUBRICATION SYSTEMS

Hybrid lubrication system and bearing Patent  
[NASA-CASE-XNP-01641] c 15 N71-22997  
Fluid lubricant system Patent  
[NASA-CASE-XNP-03972] c 15 N71-23048  
Journal Bearings  
[NASA-CASE-LEW-11076-2] c 37 N74-32921  
Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10467

## LUMINAIRES

Visual target for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c 31 N69-27499  
Ultraviolet resonance lamp Patent  
[NASA-CASE-ARC-10030] c 09 N71-12521  
Lamp modulator  
[NASA-CASE-KSC-10565] c 09 N72-25250  
Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c 09 N73-30181

Uniform variable light source  
[NASA-CASE-NPO-11429-1] c 74 N77-21941

Direct current ballast circuit for metal halide lamp  
[NASA-CASE-MSC-18407-1] c 33 N82-24427

## LUMINANCE

Television camera video level control system  
[NASA-CASE-MSC-18578-1] c 32 N85-21427

## LUMINOSITY

Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976

## LUMINOUS INTENSITY

Motion picture camera for optical pyrometry Patent  
[NASA-CASE-XLA-00062] c 14 N70-33254  
Radiant energy intensity measurement system Patent  
[NASA-CASE-XNP-06510] c 14 N71-23797

Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c 36 N77-19416

Solar cell assembly --- for use under high intensity illumination  
[NASA-CASE-LEW-11549-1] c 44 N77-19571

Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c 33 N77-21315

System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865

Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647

## LUMPING

Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104

## LUNAR BASES

Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046

## LUNAR COMMUNICATION

Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300

Emergency lunar communications system  
[NASA-CASE-MFS-21042] c 07 N72-25171

## LUNAR COMPOSITION

Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765

## LUNAR EXPLORATION

Backpack carrier Patent  
[NASA-CASE-LAR-10056] c 05 N71-12351

Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765

Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585

Emergency lunar communications system  
[NASA-CASE-XLA-21042] c 07 N72-25171

## LUNAR GRAVITATION

Subgravity simulator Patent  
[NASA-CASE-XMS-04798] c 11 N71-21474

## LUNAR GRAVITY SIMULATOR

Impact simulator Patent  
[NASA-CASE-XLA-00493] c 11 N70-34786

## LUNAR LANDING

Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966

## LUNAR LOGISTICS

Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585

## LUNAR ROCKS

Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c 15 N70-42034

## LUNAR SOIL

Soil particles separator, collector and viewer Patent  
[NASA-CASE-XNP-09770] c 15 N71-20440

Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036

Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420

Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MSC-12408-1] c 46 N74-13011

## LUNAR SURFACE VEHICLES

Deformable vehicle wheel Patent  
[NASA-CASE-MFS-20400] c 31 N71-18611

Resilient wheel Patent  
[NASA-CASE-MFS-13929] c 15 N71-27091

## LUNGS

Instrument for use in performing a controlled Valsalva maneuver Patent  
[NASA-CASE-XMS-01615] c 05 N70-41329

## M

## MACH NUMBER

Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088

## MACHINE TOOLS

Rock drill for recovering samples  
[NASA-CASE-XNP-07478] c 14 N69-21923  
Protective device for machine and metalworking tools Patent

[NASA-CASE-XLE-01092] c 15 N71-22797

Aligning and positioning device Patent  
[NASA-CASE-XMS-04178] c 15 N71-22798

Extrusion die for refractory metals Patent  
[NASA-CASE-XLE-06773] c 15 N71-23817

Layout tool Patent  
[NASA-CASE-FRC-10005] c 15 N71-26145

Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673

Caterpillar micro positioner  
[NASA-CASE-GSC-10780-1] c 14 N72-16283

Geneva mechanism --- including star wheel and driver  
[NASA-CASE-NPO-13281-1] c 37 N75-13266

Zero torque gear head wrench  
[NASA-CASE-NPO-13059-1] c 37 N76-20480

Precision alignment apparatus for cutting a workpiece  
[NASA-CASE-LAR-11658-1] c 37 N77-14478

Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c 37 N79-28550

Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319

Crystal cleaving machine  
[NASA-CASE-GSC-12584-1] c 37 N82-32730

Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491

## MACHINERY

Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177

Precipitation detector Patent  
[NASA-CASE-XLA-02619] c 10 N71-26334

Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c 31 N74-32917

## MACHINING

Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135

Lathe tool bit and holder for machining fiberglass materials  
[NASA-CASE-XLA-10470] c 15 N72-21489

Drilled ball bearing with a one piece anti-tipping cage assembly  
[NASA-CASE-LEW-11925-1] c 37 N75-31446

## MAGNESIUM

Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446

## MAGNESIUM ALLOYS

Method and apparatus for bonding a plastics sleeve onto a metallic body Patent  
[NASA-CASE-XLA-01262] c 15 N71-21404

Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446

## MAGNESIUM OXIDES

Method for determining presence of OH in magnesium oxide  
[NASA-CASE-NPO-10774] c 06 N72-17095

## MAGNET COILS

Superconducting alternator  
[NASA-CASE-XLE-02824] c 03 N69-39890

Circuit breaker utilizing magnetic latching relays Patent  
[NASA-CASE-MSC-11277] c 09 N71-29008

## MAGNETIC AMPLIFIERS

Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338

## MAGNETIC BEARINGS

Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067

Linear magnetic bearings  
[NASA-CASE-GSC-12582-2] c 37 N85-20337

Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N86-20804

## MAGNETIC CHARGE DENSITY

Electrostatic ion engine having a permanent magnetic circuit Patent  
[NASA-CASE-XLE-01124] c 28 N71-14043

## MAGNETIC CIRCUITS

Electrostatic ion engine having a permanent magnetic circuit Patent  
[NASA-CASE-XLE-01124] c 28 N71-14043

## MAGNETIC COILS

Time-division multiplexer Patent  
[NASA-CASE-XNP-00431] c 09 N70-38998

- Linear magnetic brake with two windings Patent  
[NASA-CASE-XLE-05079] c 15 N71-17652
- Safe-arm initiator Patent  
[NASA-CASE-LAR-10372] c 09 N71-18599
- Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905
- Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N86-20804
- MAGNETIC CONTROL**
- Fast opening diaphragm Patent  
[NASA-CASE-XLA-03860] c 15 N71-21080
- Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184
- Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459
- Magnetic bearing system  
[NASA-CASE-GSC-11878-1] c 37 N77-17464
- Low temperature latching solenoid  
[NASA-CASE-MSG-18106-1] c 33 N82-11357
- MAGNETIC CORES**
- Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c 09 N70-38804
- Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995
- Magnetic counter Patent  
[NASA-CASE-XNP-08836] c 09 N71-12515
- Pulse-type magnetic core memory element circuit with blocking oscillator feedback Patent  
[NASA-CASE-XGS-03303] c 08 N71-18595
- Magnetic core current steering commutator Patent  
[NASA-CASE-NPO-10201] c 08 N71-18694
- Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033
- Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800
- Magnetic power switch Patent  
[NASA-CASE-NPO-10242] c 09 N71-24803
- Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893
- Thermally cycled magnetometer Patent  
[NASA-CASE-XAC-03740] c 14 N71-26135
- Digital memory sense amplifying means Patent  
[NASA-CASE-XNP-01012] c 08 N71-28925
- Method of detecting impending saturation of magnetic cores  
[NASA-CASE-ERC-10089] c 23 N72-17747
- Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199
- Banded transformer cores  
[NASA-CASE-NPO-11966-1] c 33 N74-17928
- MAGNETIC DIPOLES**
- Balance torqueometer Patent  
[NASA-CASE-XGS-01013] c 14 N71-23725
- MAGNETIC DISKS**
- Disk pack cleaning table Patent Application  
[NASA-CASE-LAR-10590-1] c 15 N70-26819
- MAGNETIC FIELD CONFIGURATIONS**
- Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c 35 N77-14406
- Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905
- MAGNETIC FIELDS**
- Electric-arc heater Patent  
[NASA-CASE-XLA-00330] c 33 N70-34540
- Means for communicating through a layer of ionized gases Patent  
[NASA-CASE-XLA-01127] c 07 N70-41372
- Liquid storage tank venting device for zero gravity environment Patent  
[NASA-CASE-XLE-01449] c 15 N70-41646
- Electrostatic ion engine having a permanent magnetic circuit Patent  
[NASA-CASE-XLE-01124] c 28 N71-14043
- Wide range linear fluxgate magnetometer Patent  
[NASA-CASE-XGS-01587] c 14 N71-15962
- Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c 23 N71-16099
- Nonmagnetic, explosive actuated indexing device Patent  
[NASA-CASE-XGS-02422] c 15 N71-21529
- Solar cell and circuit array and process for nullifying magnetic fields Patent  
[NASA-CASE-XGS-03390] c 03 N71-23187
- Balance torqueometer Patent  
[NASA-CASE-XGS-01013] c 14 N71-23725
- Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c 14 N71-27325
- Segmented superconducting magnet for a broadband traveling wave maser Patent  
[NASA-CASE-XGS-10518] c 16 N71-28554
- Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619
- Ion thruster  
[NASA-CASE-LEW-10770-1] c 28 N72-22770
- Ion thruster magnetic field control  
[NASA-CASE-LEW-10835-1] c 28 N72-22771
- Determining distance to lightning strokes from a single station  
[NASA-CASE-KSC-10698] c 07 N73-20175
- Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c 33 N74-10195
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390
- Compact, high intensity arc lamp with internal magnetic field producing means  
[NASA-CASE-NPO-11510-1] c 33 N77-21315
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-1] c 34 N78-17335
- Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103
- Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569
- Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132
- Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404
- Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- MAGNETIC FILMS**
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- MAGNETIC FLUX**
- Excitation and detection circuitry for a flux responsive magnetic head  
[NASA-CASE-XNP-04183] c 09 N69-24329
- Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423
- Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123
- Hybrid lubrication system and bearing Patent  
[NASA-CASE-XNP-01641] c 15 N71-22997
- Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800
- Continuous magnetic flux pump  
[NASA-CASE-XNP-01187] c 15 N73-28516
- Magnetic-flux pump  
[NASA-CASE-XNP-01188] c 15 N73-32361
- Magnetic bearing --- for supplying magnetic fluxes  
[NASA-CASE-GSC-11079-1] c 37 N75-18574
- Linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft power supply  
[NASA-CASE-GSC-12518-1] c 33 N82-24421
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067
- Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083
- Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N86-20804
- MAGNETIC FORMING**
- Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24833
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-3] c 15 N71-24865
- MAGNETIC INDUCTION**
- Continuously operating induction plasma accelerator Patent  
[NASA-CASE-XLA-01354] c 25 N70-36946
- Drive circuit for minimizing power consumption in inductive load Patent  
[NASA-CASE-NPO-10716] c 09 N71-24892
- Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c 09 N71-27364
- Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235
- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c 70 N74-21300
- MAGNETIC LENSES**
- Quadrupole mass filter with means to generate a noise spectrum exclusive of the resonant frequency of the desired ions to deflect stable ions  
[NASA-CASE-XNP-04231] c 14 N73-32325
- MAGNETIC MATERIALS**
- Low viscosity magnetic fluid obtained by the colloidal suspension of magnetic particles Patent  
[NASA-CASE-XLE-01512] c 12 N70-40124
- MAGNETIC MEASUREMENT**
- Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423
- Wide range linear fluxgate magnetometer Patent  
[NASA-CASE-XGS-01587] c 14 N71-15962
- RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390
- MAGNETIC PERMEABILITY**
- Linear motion valve  
[NASA-CASE-MSG-20148-1] c 37 N85-29284
- MAGNETIC POLES**
- Magnetohydrodynamic induction machine  
[NASA-CASE-XNP-07481] c 25 N69-21929
- Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c 35 N77-14406
- MAGNETIC PUMPING**
- Continuous magnetic flux pump  
[NASA-CASE-XNP-01187] c 15 N73-28516
- Magnetic-flux pump  
[NASA-CASE-XNP-01188] c 15 N73-32361
- Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c 37 N74-27904
- Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625
- MAGNETIC RECORDING**
- Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778] c 08 N71-22710
- Magnetic recording head and method of making same Patent  
[NASA-CASE-GSC-10097-1] c 08 N71-27210
- Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c 35 N79-16246
- Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- MAGNETIC SIGNALS**
- Plural recorder system  
[NASA-CASE-XMS-08949] c 09 N69-21467
- MAGNETIC STORAGE**
- Binary magnetic memory device Patent  
[NASA-CASE-XGS-00174] c 08 N70-34743
- Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c 08 N71-12504
- Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418
- Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135
- Dual purpose momentum wheels for spacecraft with magnetic recording  
[NASA-CASE-NPO-11481] c 21 N73-13644
- Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-1] c 28 N78-24365
- MAGNETIC SUSPENSION**
- Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c 37 N78-27424
- Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c 35 N79-26372
- Stirling cycle cryogenic cooler --- magnetically suspended pistons  
[NASA-CASE-GSC-12697-1] c 31 N82-11312
- Magnetic bearing and motor  
[NASA-CASE-GSC-12726-1] c 37 N83-34323
- MAGNETIC SWITCHING**
- Magnetic power switch Patent  
[NASA-CASE-NPO-10242] c 09 N71-24803
- Current steering switch Patent  
[NASA-CASE-XNP-08567] c 09 N71-26000
- MAGNETIC TAPE TRANSPORTS**
- Reel safety brake  
[NASA-CASE-GSC-11960-1] c 37 N77-14479
- MAGNETIC TAPES**
- Endless tape cartridge Patent  
[NASA-CASE-XGS-00769] c 14 N70-41647
- Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c 07 N71-10609
- Low friction magnetic recording tape Patent  
[NASA-CASE-XGS-00373] c 23 N71-15978

- System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c 08 N71-21042
- Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995
- Technique for recovery of voice data from heat damaged magnetic tape  
[NASA-CASE-MS-C-14219-1] c 32 N74-27612
- Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c 33 N76-18353
- Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N86-25292
- MAGNETIC TRANSDUCERS**  
Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397
- MAGNETIZATION**  
Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293
- MAGNETO-OPTICS**  
Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c 36 N74-13205
- MAGNETOHYDRODYNAMIC FLOW**  
Magneto-plasma-dynamic arc thruster  
[NASA-CASE-LEW-11180-1] c 25 N73-25760
- MAGNETOHYDRODYNAMIC GENERATORS**  
Magneto-hydrodynamic induction machine  
[NASA-CASE-XNP-07481] c 25 N69-21929
- Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983
- Two-fluid magnetohydrodynamic system and method for thermal-electric power conversion Patent  
[NASA-CASE-XNP-00644] c 03 N70-36803
- Crossed-field MHD plasma generator/accelerator Patent  
[NASA-CASE-XLA-03374] c 25 N71-15562
- Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573
- MAGNETOMETERS**  
Nonmagnetic thermal motor for a magnetometer  
[NASA-CASE-XAR-03786] c 09 N69-21313
- Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423
- Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123
- Wide range linear fluxgate magnetometer Patent  
[NASA-CASE-XGS-01587] c 14 N71-15962
- Optically pumped resonance magnetometer for determining vectorial components in a spatial coordinate system Patent  
[NASA-CASE-XGS-04879] c 14 N71-20428
- Thermally cycled magnetometer Patent  
[NASA-CASE-XAC-03740] c 14 N71-26135
- Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c 14 N71-27325
- Hall effect magnetometer  
[NASA-CASE-LEW-11632-2] c 35 N75-13213
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390
- Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c 04 N76-20114
- Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056
- Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397
- Low energy electron magnetometer using a monoenergetic electron beam  
[NASA-CASE-LAR-12706-1] c 35 N84-12444
- Improved flux-gate magnetometer  
[NASA-CASE-LAR-13560-1] c 35 N86-32701
- MAGNETRON SPUTTERING**  
Method of producing high T superconducting NbN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N86-21401
- MAGNETRONS**  
Tuning arrangement for an electron discharge device or the like Patent  
[NASA-CASE-XNP-09771] c 09 N71-24841
- MAGNETS**  
Magnetic electrical connectors for biomedical percutaneous implants  
[NASA-CASE-KSC-11030-1] c 52 N77-25772
- Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163
- Linear magnetic bearing  
[NASA-CASE-GSC-12517-1] c 37 N83-32067
- Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017
- Linear motion valve  
[NASA-CASE-MS-C-20148-1] c 37 N85-29284
- MAGNIFICATION**  
Image magnification adapter for cameras Patent  
[NASA-CASE-XMF-03844-1] c 14 N71-26474
- Magnifying scratch gage force transducer  
[NASA-CASE-LAR-10496-1] c 14 N72-22437
- Magnifying image intensifier  
[NASA-CASE-GSC-12010-1] c 74 N78-18905
- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124
- MAGNITUDE**  
Balance torquemeter Patent  
[NASA-CASE-XGS-01013] c 14 N71-23725
- MAINTENANCE**  
Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633
- Bonding or repairing process  
[NASA-CASE-MS-C-12357] c 15 N73-12489
- Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c 24 N74-30001
- System and method for refurbishing and processing parachutes --- monorial conveyor system  
[NASA-CASE-KSC-11042-2] c 02 N81-26073
- Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839
- Method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c 09 N82-29330
- Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520
- Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MS-C-18736-1] c 24 N83-13172
- Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736
- MALEATES**  
Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- MALFUNCTIONS**  
Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c 14 N70-36807
- MANDRELS**  
Mandrel for shaping solid propellant rocket fuel into a motor casing Patent  
[NASA-CASE-XLA-00304] c 27 N70-34783
- Rotating mandrel for assembly of inflatable devices Patent  
[NASA-CASE-XLA-04143] c 15 N71-17687
- Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779
- MANEUVERABILITY**  
Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479
- MANGANESE**  
Manganese bismuth films with narrow transfer characteristics for Curie-point switching  
[NASA-CASE-NPO-11336-1] c 76 N79-16678
- MANIFOLDS**  
Injector for bipropellant rocket engines Patent  
[NASA-CASE-XMF-00148] c 28 N70-38710
- Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366
- Collimated beam manifold with the number of output beams variable at a given output angle  
[NASA-CASE-MFS-25312-1] c 74 N83-17305
- Advanced vapor supply manifold  
[NASA-CASE-LAR-13259-1] c 37 N86-20800
- MANIPULATORS**  
Remote control manipulator for zero gravity environment  
[NASA-CASE-MFS-14405] c 15 N72-28495
- Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c 54 N75-12616
- Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MS-C-14245-1] c 18 N75-27041
- Cooperative multi-axis sensor for teleoperation of article manipulating apparatus  
[NASA-CASE-NPO-13386-1] c 54 N75-27758
- Remotely operable articulated manipulator  
[NASA-CASE-MFS-22707-1] c 37 N76-15457
- Remote manipulator system  
[NASA-CASE-MFS-22022-1] c 37 N76-15460
- Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c 54 N77-32721
- Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c 54 N78-17676
- Terminal guidance sensor system  
[NASA-CASE-NPO-14521-1] c 54 N79-20746
- Compact artificial hand  
[NASA-CASE-NPO-13906-1] c 54 N79-24652
- Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c 37 N79-28551
- Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c 37 N81-14320
- Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718
- Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519
- Apparatus for sequentially transporting containers  
[NASA-CASE-MFS-23846-1] c 37 N82-32731
- Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286
- Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479
- Apparatus for adapting an end effector device remotely controlled manipulator arm  
[NASA-CASE-MFS-25949-1] c 37 N86-19603
- Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789
- Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- MANNED ORBITAL LABORATORIES**  
Rotating space station simulator Patent  
[NASA-CASE-XLA-03127] c 11 N71-10776
- MANNED ORBITAL RESEARCH LABORATORIES**  
Erectable modular space station Patent  
[NASA-CASE-XLA-00678] c 31 N70-34296
- Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373
- MANNED SPACE FLIGHT**  
Transfer valve Patent  
[NASA-CASE-XAC-01158] c 15 N71-23051
- Air removal device  
[NASA-CASE-XLA-8914] c 15 N73-12492
- MANNED SPACECRAFT**  
Space capsule Patent  
[NASA-CASE-XLA-00149] c 31 N70-37938
- Variable-geometry winged reentry vehicle Patent  
[NASA-CASE-XLA-00241] c 31 N70-37986
- Vehicle parachute and equipment jettison system Patent  
[NASA-CASE-XLA-00195] c 02 N70-38009
- Space capsule Patent  
[NASA-CASE-XLA-01332] c 31 N71-15664
- Artificial gravity spin deployment system Patent  
[NASA-CASE-XNP-02595] c 31 N71-21881
- Specialized halogen generator for purification of water Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933
- Collapsible Apollo couch  
[NASA-CASE-MS-C-13140] c 05 N72-11085
- Space vehicle with artificial gravity and earth-like environment  
[NASA-CASE-LEW-11101-1] c 31 N73-32750
- MANOMETERS**  
Magnetically centered liquid column float Patent  
[NASA-CASE-XAC-00030] c 14 N70-34820
- Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c 14 N73-30394
- MANUAL CONTROL**  
Multiple circuit switch apparatus with improved pivot actuator structure Patent  
[NASA-CASE-XAC-03777] c 10 N71-15909
- Null device for hand controller Patent  
[NASA-CASE-XLA-01808] c 15 N71-20740
- Manually actuated heat pump  
[NASA-CASE-NPO-10677] c 05 N72-11084
- Numerical computer peripheral interactive device with manual controls  
[NASA-CASE-NPO-11497] c 08 N73-25206
- Solid state controller three axes controller  
[NASA-CASE-MS-C-12394-1] c 08 N74-10942
- G-load measuring and indicator apparatus  
[NASA-CASE-ARC-10806-1] c 35 N75-29381
- Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205
- MANUFACTURING**  
A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148
- Indexed keyed connection Patent  
[NASA-CASE-XMS-02532] c 15 N70-41808

- Method of making screen by casting Patent  
[NASA-CASE-XLE-00953] c 15 N71-15966
- Space manufacturing machine Patent  
[NASA-CASE-MFS-20410] c 15 N71-19214
- Fluid containers and resealable septum therefor Patent  
[NASA-CASE-NPO-10123] c 15 N71-24835
- Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779
- Method of making shielded flat cable Patent  
[NASA-CASE-MFS-13687] c 09 N71-28691
- Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c 17 N71-29137
- Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c 44 N74-19692
- Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c 31 N74-32917
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260
- Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c 76 N76-25049
- Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c 44 N77-22607
- Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482
- Method for making a hot wire anemometer and product thereof  
[NASA-CASE-ARC-10900-1] c 35 N77-24454
- Aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-3] c 44 N80-16452
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c 27 N81-24258
- Inorganic spark chamber frame and method of making the same  
[NASA-CASE-GSC-12354-1] c 35 N82-24471
- Photoelectric detection system --- manufacturing automation  
[NASA-CASE-MFS-23776-1] c 33 N82-28545
- Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589
- The 1-(diorganoxyphosphonyl)methyl-2, 4- and -2, 6-dinitro and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N86-20499
- MAPPING**
- Random function tracer Patent  
[NASA-CASE-XLA-01401] c 15 N71-21179
- Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118
- Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679
- Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248
- Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711
- MAPS**
- Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c 19 N74-21015
- Optical process for producing classification maps from multispectral data  
[NASA-CASE-MSC-14472-1] c 43 N77-10584
- MASERS**
- Segmented superconducting magnet for a broadband traveling wave maser Patent  
[NASA-CASE-XGS-10518] c 16 N71-28554
- Maser for frequencies in the 7-20 GHz range  
[NASA-CASE-NPO-11437] c 16 N72-28521
- Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c 36 N76-31512
- Multistation refrigeration system  
[NASA-CASE-NPO-13839-1] c 31 N78-25256
- External bulb variable volume maser  
[NASA-CASE-GSC-12334-1] c 36 N79-14362
- Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372
- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350
- Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- MASKING**
- Masking device Patent  
[NASA-CASE-XNP-02092] c 15 N70-42033
- High resolution developing of photosensitive resists Patent  
[NASA-CASE-XGS-04993] c 14 N71-17574
- Low defect, high purity crystalline layers grown by selective deposition  
[NASA-CASE-NPO-15813-1] c 76 N85-30922
- MASKS**
- Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N86-20587
- MASS**
- Mass measuring system Patent  
[NASA-CASE-XMS-03371] c 05 N70-42000
- Dynamic vibration absorber Patent  
[NASA-CASE-LAR-10083-1] c 15 N71-27006
- Fluid mass sensor for a zero gravity environment  
[NASA-CASE-MSC-14653-1] c 35 N77-19385
- MASS BALANCE**
- Two-plane balance Patent  
[NASA-CASE-XAC-00073] c 14 N70-34813
- Apparatus for testing a pressure responsive instrument Patent  
[NASA-CASE-XMF-04134] c 14 N71-23755
- MASS DISTRIBUTION**
- Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339
- MASS FLOW**
- Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736
- Nuclear mass flowmeter  
[NASA-CASE-MFS-20485] c 14 N72-11365
- Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds  
[NASA-CASE-LAR-10578-1] c 12 N73-25262
- MASS SPECTROMETERS**
- Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c 06 N71-13461
- Time of flight mass spectrometer with feedback means from the detector to the low source and a specific counter Patent  
[NASA-CASE-XNP-01056] c 14 N71-23041
- Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c 14 N71-28863
- Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992
- Method and apparatus for determining the contents of contained gas samples  
[NASA-CASE-GSC-10903-1] c 14 N73-12444
- Quadrupole mass filter with means to generate a noise spectrum exclusive of the resonant frequency of the desired ions to deflect stable ions  
[NASA-CASE-XNP-04231] c 14 N73-32325
- Fast scan control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c 35 N74-34857
- Mass spectrometer with magnetic pole pieces providing the magnetic fields for both the magnetic sector and an ion-type vacuum pump  
[NASA-CASE-NPO-13663-1] c 35 N77-14406
- Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c 35 N77-24455
- Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c 35 N80-28686
- Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016
- MASS SPECTROSCOPY**
- Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c 35 N76-16393
- Fluid sampling device  
[NASA-CASE-GSC-12143-1] c 35 N77-32456
- Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184
- MATERIAL ABSORPTION**
- Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c 14 N71-18483
- MATERIALS**
- Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214
- MATERIALS HANDLING**
- Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492
- Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c 15 N70-36901
- Air bearing Patent  
[NASA-CASE-XMF-01887] c 15 N71-10617
- Quick attach and release fluid coupling assembly Patent  
[NASA-CASE-XKS-01985] c 15 N71-10782
- Method and apparatus for cryogenic wire stripping Patent  
[NASA-CASE-MFS-10340] c 15 N71-17628
- Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089
- Method of making foamed materials in zero gravity  
[NASA-CASE-XMF-09902] c 15 N72-11387
- Mechanically extendible telescoping boom  
[NASA-CASE-NPO-11118] c 03 N72-25021
- Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514
- Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c 15 N73-27405
- Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c 31 N74-27900
- Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540
- Liquid immersion apparatus for minute articles  
[NASA-CASE-MFS-25363-1] c 37 N82-12441
- Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515
- MATERIALS RECOVERY**
- Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245
- Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471
- Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119
- MATERIALS SCIENCE**
- Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c 11 N71-24985
- Apparatus and method for measuring the Seebeck coefficient and resistivity of materials  
[NASA-CASE-NPO-11749] c 14 N73-28486
- MATERIALS TESTS**
- Thermal shock apparatus Patent  
[NASA-CASE-XLE-02024] c 14 N71-22964
- Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
[NASA-CASE-XMS-02930] c 11 N71-23042
- Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161
- Tube sealing device Patent  
[NASA-CASE-NPO-10431] c 15 N71-29132
- Burn rate testing apparatus  
[NASA-CASE-XMS-09690] c 33 N72-25913
- Multi axes vibration fixtures  
[NASA-CASE-MFS-20242] c 14 N73-19421
- Material fatigue testing system  
[NASA-CASE-MFS-20673] c 14 N73-20476
- MATHEMATICAL LOGIC**
- Logical function generator  
[NASA-CASE-XLA-05099] c 09 N73-13209
- MATRICES (CIRCUITS)**
- Solar cell submodule Patent  
[NASA-CASE-XNP-05821] c 03 N71-11056
- Magnetic matrix memory system Patent  
[NASA-CASE-XMF-05835] c 08 N71-12504
- Solar cell matrix Patent  
[NASA-CASE-NPO-10821] c 03 N71-19545
- Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033
- Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650
- Solid state matrices  
[NASA-CASE-NPO-10591] c 03 N72-22041
- MATRIX MATERIALS**
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039
- Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526
- MCLEOD GAGES**
- Automatic recording McLeod gauge Patent  
[NASA-CASE-XLE-03280] c 14 N71-23093
- Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450
- MEASURING INSTRUMENTS**
- Device for determining the accuracy of the flare on a flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785
- Angular measurement system Patent  
[NASA-CASE-XMF-00447] c 14 N70-33179
- Two-plane balance Patent  
[NASA-CASE-XAC-00073] c 14 N70-34813
- Parallel motion suspension device Patent  
[NASA-CASE-XNP-01567] c 15 N70-41310



Vibrating structure displacement measuring instrument Patent  
[NASA-CASE-XLA-03135] c 32 N71-16428  
Inspection gage for boss Patent  
[NASA-CASE-XMF-04966] c 14 N71-17658  
Vapor pressure measuring system and method Patent  
[NASA-CASE-XMS-01618] c 14 N71-20741  
Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c 14 N71-21007  
Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877  
Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991  
Moment of inertia test fixture Patent  
[NASA-CASE-XGS-01023] c 14 N71-22992  
Electron beam instrument for measuring electric fields Patent  
[NASA-CASE-XMF-10289] c 14 N71-23699  
Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790  
Internal flare angle gauge Patent  
[NASA-CASE-XMF-04415] c 14 N71-24693  
RC rate generator for slow speed measurement Patent  
[NASA-CASE-XMF-02966] c 10 N71-24863  
Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490  
Layout tool Patent  
[NASA-CASE-FRC-10005] c 15 N71-26145  
Method and apparatus for detecting gross leaks Patent  
[NASA-CASE-ERC-10033] c 14 N71-26672  
Arbitrarily shaped model survey system Patent  
[NASA-CASE-LAR-10098] c 32 N71-26681  
Thickness measuring and injection device Patent  
[NASA-CASE-MFS-20261] c 14 N71-27005  
Resonant infrasonic gauging apparatus  
[NASA-CASE-MSC-11847-1] c 14 N72-11363  
Roll alignment detector  
[NASA-CASE-GSC-10514-1] c 14 N72-20379  
Cosmic dust sensor  
[NASA-CASE-GSC-10503-1] c 14 N72-20381  
Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465  
Capacitive tank gaging apparatus being independent of liquid distribution  
[NASA-CASE-MFS-21629] c 14 N72-22442  
Spherical measurement device  
[NASA-CASE-XLA-06683] c 14 N72-28436  
Altitude measuring system  
[NASA-CASE-ERC-10412-1] c 09 N73-12211  
Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415  
Multi axes vibration fixtures  
[NASA-CASE-MFS-20242] c 14 N73-19421  
Material fatigue testing system  
[NASA-CASE-MFS-20673] c 14 N73-20476  
Droplet monitoring probe  
[NASA-CASE-NPO-10985] c 14 N73-20478  
Apparatus and method for measuring the Seebeck coefficient and resistivity of materials  
[NASA-CASE-NPO-11749] c 14 N73-28486  
RF-source resistance meters  
[NASA-CASE-NPO-11291-1] c 14 N73-30388  
Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c 14 N73-30394  
Holographic thin film analyzer  
[NASA-CASE-MFS-20823-1] c 16 N73-30476  
Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c 35 N74-13129  
Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c 35 N74-22095  
Apparatus and method for processing Korotkov sounds --- for blood pressure measurement  
[NASA-CASE-MSC-13999-1] c 52 N74-26626  
Electric field measuring and display system --- for cloud formations  
[NASA-CASE-KSC-10731-1] c 33 N74-27862  
Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c 35 N74-27865  
Measuring probe position recorder  
[NASA-CASE-LAR-10806-1] c 35 N74-32877  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615  
Thrust measurement  
[NASA-CASE-XMS-05731] c 35 N75-29382  
Method and apparatus for measuring web material wound on a reel  
[NASA-CASE-GSC-11902-1] c 38 N77-17495  
Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c 74 N77-22950

Direct reading inductance meter  
[NASA-CASE-NPO-13792-1] c 35 N77-32455  
Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c 04 N78-17031  
Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c 37 N78-17386  
Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c 35 N78-19465  
Condition sensor system and method  
[NASA-CASE-MSC-14805-1] c 54 N78-32720  
Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337  
Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338  
Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359  
Method and apparatus for measuring minority carrier lifetimes and bulk diffusion length in P-N junction solar cells  
[NASA-CASE-NPO-14100-1] c 44 N79-12541  
Lightning current detector  
[NASA-CASE-KSC-11057-1] c 33 N79-14305  
Contour measurement system  
[NASA-CASE-MFS-23726-1] c 43 N79-26439  
Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c 46 N80-10709  
Displacement probes with self-contained exciting medium  
[NASA-CASE-LAR-11690-1] c 35 N80-14371  
Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c 35 N80-18357  
Geological assessment probe  
[NASA-CASE-NPO-14558-1] c 46 N80-24906  
Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c 51 N80-27067  
Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c 06 N81-17057  
Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381  
Lightning discharge identification system  
[NASA-CASE-KSC-11099-1] c 47 N82-24779  
Temperature averaging thermal probe  
[NASA-CASE-GSC-12795-1] c 35 N83-20085  
Flow resistivity instrument  
[NASA-CASE-LAR-13053-1] c 43 N83-29783  
Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-2] c 52 N83-29991  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193  
Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934  
Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-28575  
Self-charging metering and dispensing device for fluids  
[NASA-CASE-MSC-20275-1] c 35 N85-21595  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA 1.71:NPO-15494-2] c 35 N85-34373  
Temperature averaging thermal probe  
[NASA-CASE-GSC-12795-1] c 35 N86-19580

## MECHANICAL DEVICES

Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907  
Load cell protection device Patent  
[NASA-CASE-XMS-06782] c 32 N71-15974  
Satellite despin device Patent  
[NASA-CASE-XMF-08523] c 31 N71-20396  
Two force component measuring device Patent  
[NASA-CASE-XAC-04886-1] c 14 N71-20439  
Latching mechanism Patent  
[NASA-CASE-XMS-03745] c 15 N71-21076  
Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177  
Random function tracer Patent  
[NASA-CASE-XLA-01401] c 15 N71-21179  
Canister closing device Patent  
[NASA-CASE-XLA-01446] c 15 N71-21528  
Nonmagnetic, explosive actuated indexing device Patent  
[NASA-CASE-XGS-02422] c 15 N71-21529  
Central spar and module joint Patent  
[NASA-CASE-XNP-02341] c 15 N71-21531  
Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255  
Alloys for bearings Patent  
[NASA-CASE-XLE-05033] c 15 N71-23810  
Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c 15 N71-24045

Winch having cable position and load indicators Patent  
[NASA-CASE-MSC-12052-1] c 15 N71-24599  
Redundant actuating mechanism Patent  
[NASA-CASE-XGS-08718] c 15 N71-24600  
Shock tube powder dispersing apparatus Patent  
[NASA-CASE-XLE-04946] c 17 N71-24911  
Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984  
Layout tool Patent  
[NASA-CASE-FRC-10005] c 15 N71-26145  
Thermostatic actuator  
[NASA-CASE-NPO-10637] c 15 N72-12409  
Ball screw linear actuator  
[NASA-CASE-NPO-11222] c 15 N72-25456  
Spherical measurement device  
[NASA-CASE-XLA-06683] c 14 N72-28436  
Thermal compensating structural member  
[NASA-CASE-MFS-20433] c 15 N72-28496  
Spiral groove seal  
[NASA-CASE-XLE-10326-2] c 15 N72-29488  
Solar energy powered heliotrope  
[NASA-CASE-GSC-10945-1] c 21 N72-31637  
Adjustable force probe  
[NASA-CASE-MFS-20760] c 14 N72-33377  
Rotary actuator  
[NASA-CASE-NPO-10680] c 31 N73-14855  
Collapsible structure for an antenna reflector  
[NASA-CASE-NPO-11751] c 07 N73-24176  
Foot pedal operated fluid type exercising device  
[NASA-CASE-MSC-11561-1] c 05 N73-32014  
Exposure interlock for oscilloscope cameras  
[NASA-CASE-LAR-10319-1] c 14 N73-32322  
Reeling system  
[NASA-CASE-LAR-10129-2] c 37 N74-20063  
Sprag solenoid brake --- development and operations of electrically controlled brake  
[NASA-CASE-MFS-21846-1] c 37 N74-26976  
Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379  
Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c 51 N75-13502  
Clock setter  
[NASA-CASE-LAR-11458-1] c 35 N76-16392  
Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c 37 N76-21554  
Reel safety brake  
[NASA-CASE-GSC-11960-1] c 37 N77-14479  
Mechanical sequencer  
[NASA-CASE-MSC-19536-1] c 37 N77-22482  
Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c 37 N77-23483  
Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c 54 N78-17676  
Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119  
Actuator mechanism  
[NASA-CASE-GSC-11883-2] c 37 N78-31426  
Quartz ball valve  
[NASA-CASE-NPO-14473-1] c 37 N80-23654  
Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c 37 N80-23655  
Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137  
Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c 37 N81-14320  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661  
Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673  
Mechanical end joint system for structural column elements  
[NASA-CASE-LAR-12482-1] c 37 N82-32732  
Compression test apparatus  
[NASA-CASE-MSC-18723-1] c 35 N83-21312  
Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482  
Clamp-mount device  
[NASA-CASE-MFS-25510-1] c 37 N84-16560  
Self-indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N84-20860  
Method and apparatus for gripping uniaxial fibrous composite materials  
[NASA-CASE-LEW-13758-1] c 24 N84-27829  
Extended moment arm anti-spin device  
[NASA-CASE-LAR-12979-1] c 05 N85-21147



Connection system --- insuring against loss of a tool component without using multiple tethers  
[NASA-CASE-MSC-20319-1] c 37 N85-21649  
Apparatus for mounting a field emission cathode  
[NASA-CASE-LEW-14108-1] c 33 N85-29149  
Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N86-20807

**MECHANICAL DRIVES**

Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658  
Anti-backlash circuit for hydraulic drive system Patent  
[NASA-CASE-XNP-01020] c 03 N71-12260  
Precision stepping drive Patent  
[NASA-CASE-MFS-14772] c 15 N71-17692  
Incremental motion drive system Patent  
[NASA-CASE-XNP-08897] c 15 N71-17694  
Ratchet mechanism Patent  
[NASA-CASE-MFS-12805] c 15 N71-17805  
Welding skate with computerized control Patent  
[NASA-CASE-XMF-07069] c 15 N71-23815  
Reversible motion drive system Patent  
[NASA-CASE-NPO-10173] c 15 N71-24696  
Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c 10 N71-27136  
Energy absorption device Patent  
[NASA-CASE-XNP-01848] c 15 N71-28959  
Boring bar drive mechanism Patent  
[NASA-CASE-XLA-03661] c 15 N71-33518  
Rotary actuator  
[NASA-CASE-NPO-10244] c 15 N72-26371  
Rotary actuator  
[NASA-CASE-NPO-10680] c 31 N73-14855  
Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c 37 N74-21060  
Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
[NASA-CASE-MFS-20645-1] c 37 N74-23070  
Concentric differential gearing arrangement  
[NASA-CASE-ARC-10462-1] c 37 N74-27901  
Geneva mechanism --- including star wheel and driver  
[NASA-CASE-NPO-13281-1] c 37 N75-13266  
Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c 37 N77-12402  
Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401  
Hydraulic drain means for servo-systems  
[NASA-CASE-NPO-10316-1] c 37 N77-22479  
Mechanical sequencer  
[NASA-CASE-MSC-19536-1] c 37 N77-22482  
Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c 07 N78-17056  
Wobble gear drive mechanism --- for aerospace environments  
[NASA-CASE-WOO-00625] c 37 N78-17385  
Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c 37 N79-28550  
Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c 18 N80-14183  
Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c 37 N80-32716  
Belt for transmitting power from a cogged driving member to a cogged driven member  
[NASA-CASE-GSC-12289-1] c 37 N80-32717  
Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220  
Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364  
Clutchless multiple drive source for output shaft  
[NASA-CASE-ARC-11325-1] c 37 N82-22496  
Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944  
Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078  
Remotely operable peristaltic pump  
[NASA-CASE-MFS-28059-1] c 37 N85-29288  
Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N86-19611  
Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N86-21147  
Remotely operable peristaltic pump  
[NASA-CASE-MFS-28059-1] c 37 N86-32738  
**MECHANICAL ENGINEERING**  
Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c 37 N74-18127  
Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c 37 N79-22475

**MECHANICAL MEASUREMENT**

Strain gage Patent Application  
[NASA-CASE-FRC-10053] c 14 N70-35587  
Apparatus for absorbing and measuring power Patent  
[NASA-CASE-XLE-00720] c 14 N70-40201  
Strain sensor for high temperatures Patent  
[NASA-CASE-XNP-09205] c 14 N71-17657  
Extensometer Patent  
[NASA-CASE-XMF-04680] c 15 N71-19489  
Hall effect transducer  
[NASA-CASE-LAR-10620-1] c 09 N72-25255  
Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c 35 N76-14430  
Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400  
Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875

**MECHANICAL PROPERTIES**

High temperature testing apparatus Patent  
[NASA-CASE-XLE-00335] c 14 N70-35368  
Fluoroether modified epoxy composites  
[NASA-CASE-NPO-11418-1] c 24 N84-11213  
Process for improving mechanical properties of epoxy resins by addition of cobalt ions  
[NASA-CASE-LAR-13230-1] c 24 N84-34571  
Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349  
Containerless high purity pulling process and apparatus for glass fiber  
[NASA-CASE-MFS-25905-2] c 31 N86-21718  
Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526

**MECHANICS (PHYSICS)**

Gravity stabilized flying vehicle Patent  
[NASA-CASE-MSC-12111-1] c 02 N71-11039

**MECHANIZATION**

Machine for use in monitoring fatigue life for a plurality of elastomeric specimens  
[NASA-CASE-NPO-13731-1] c 39 N78-10493

**MEDICAL ELECTRONICS**

Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c 54 N75-13531  
Pocket ECG electrode  
[NASA-CASE-ARC-11258-1] c 52 N80-33081  
Subcutaneous electrode structure  
[NASA-CASE-ARC-11117-1] c 52 N81-14612

**MEDICAL EQUIPMENT**

Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189  
Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c 05 N71-11202  
Laser machining apparatus Patent  
[NASA-CASE-HQN-10541-2] c 15 N71-27135  
Telemetry actuated switch  
[NASA-CASE-ARC-10105] c 09 N72-17153  
Tilting table for ergometer and for other biomedical devices  
[NASA-CASE-MFS-21010-1] c 05 N73-30078  
Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions  
[NASA-CASE-GSC-11169-2] c 05 N73-32011  
Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123  
Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761  
Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c 54 N76-22914  
Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525  
Corneal seal device  
[NASA-CASE-LEW-12258-1] c 52 N77-28716  
Snap-in compressible biomedical electrode  
[NASA-CASE-MSC-14623-1] c 52 N77-28717  
Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c 52 N78-14773  
Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c 34 N78-25351  
Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c 52 N80-18690  
Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605  
Urine collection device  
[NASA-CASE-MSC-16433-1] c 52 N81-24711  
Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25662

Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875  
Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c 52 N82-29862  
Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c 52 N83-21785  
System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346  
Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388  
Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389  
Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112

**MELTING**

Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125

**MELTING POINTS**

Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c 27 N79-33316  
Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314  
High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1-SB] c 24 N85-30033

**MELTS (CRYSTAL GROWTH)**

Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798  
Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419  
Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c 76 N80-32244  
Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389  
Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105  
Controlled in situ etch-back  
[NASA-CASE-NPO-15625-1] c 76 N83-20789  
Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220  
High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N84-16986  
Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113  
Total immersion crystal growth  
[NASA-CASE-NPO-15800-2] c 76 N85-22178  
Ribbon growing method and apparatus  
[NASA-CASE-NPO-16306-1-CU] c 76 N85-30934  
Containerless high purity pulling process and apparatus for glass fiber  
[NASA-CASE-MFS-25905-2] c 31 N86-21718

**MEMBRANE STRUCTURES**

Liquid junction and method of fabricating the same Patent Application  
[NASA-CASE-NPO-10682] c 15 N70-34699  
Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233  
Flexible composite membrane Patent  
[NASA-CASE-NPO-08837] c 18 N71-16210  
Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747  
Meteoroid capture cell construction  
[NASA-CASE-MSC-12423-1] c 91 N76-30131  
Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c 27 N80-16163  
In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c 27 N81-24257  
Separator for alkaline batteries and method of making same  
[NASA-CASE-GSC-10350-1] c 44 N82-24642  
Separator for alkaline electric batteries and method of making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644

**MEMBRANES**

Apparatus for measuring swelling characteristics of membranes  
[NASA-CASE-XGS-03865] c 14 N69-21363  
Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c 18 N71-20742

- lonene membrane separator  
[NASA-CASE-NPO-11091] c 18 N72-22567
- Dual membrane hollow fiber fuel cell and method of operating same  
[NASA-CASE-NPO-13732-1] c 44 N79-10513
- Microelectrophoretic apparatus and process  
[NASA-CASE-ARC-11121-1] c 25 N79-14169
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687
- Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MS-C-18172-1] c 26 N80-19237
- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c 27 N80-23452
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- Air removal device --- life support systems  
[NASA-CASE-XLA-8914-2] c 25 N82-21269
- Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641
- Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370
- Optical fiber tactile sensor  
[NASA-CASE-NPO-15375-1] c 74 N84-11921
- Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361
- MEMORY**  
Method for making conductors for ferrite memory arrays --- from pre-formed metal conductors  
[NASA-CASE-LAR-10994-1] c 24 N75-13032
- MEMORY (COMPUTERS)**  
Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c 60 N85-21992
- MERCURY (METAL)**  
Mercury capillary interrupter Patent  
[NASA-CASE-XNP-02251] c 12 N71-20896
- Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312
- Feed system for an ion thruster  
[NASA-CASE-NPO-10737] c 28 N72-11709
- MERCURY VAPOR**  
Mercury capillary interrupter Patent  
[NASA-CASE-XNP-02251] c 12 N71-20896
- Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294
- METABOLIC WASTES**  
Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721
- Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MS-C-16777-1] c 51 N80-27067
- METABOLISM**  
Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c 25 N75-12086
- Process for control of cell division  
[NASA-CASE-LAR-10773-3] c 51 N77-25769
- Metabolic rate meter and method  
[NASA-CASE-MS-C-12239-1] c 52 N79-21750
- METAL BONDING**  
Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786
- Method of making a diffusion bonded refractory coating Patent  
[NASA-CASE-XLE-01604-2] c 15 N71-15610
- Metal valve pintle with encapsulated elastomeric body Patent  
[NASA-CASE-MS-C-12116-1] c 15 N71-17648
- Apparatus for the determination of the existence or non-existence of a bonding between two members Patent  
[NASA-CASE-MFS-13686] c 15 N71-18132
- Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078
- Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c 03 N71-23006
- Silicon solar cell with cover glass bonded to cell by metal pattern Patent  
[NASA-CASE-XLE-09569] c 03 N71-23449
- Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c 15 N72-23497
- Bonding or repairing process  
[NASA-CASE-MS-C-12357] c 15 N73-12489

- Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c 37 N74-21057
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185
- Bi-metallic junctions  
[NASA-CASE-LEW-11573-1] c 26 N77-28265
- Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289
- Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c 37 N79-13364
- Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c 37 N80-23655
- Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c 34 N80-24573
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N84-20670
- Impacting device for testing insulation  
[NASA-CASE-MFS-25862-2] c 37 N84-33807
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550
- METAL COATINGS**  
Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443
- Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078
- Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047
- Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808
- Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040
- Selective nickel deposition  
[NASA-CASE-LEW-10965-1] c 15 N72-25452
- Wide temperature range electronic device with lead attachment  
[NASA-CASE-ERC-10224-2] c 09 N73-27150
- Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c 44 N76-14595
- Ultraviolet light reflective coating  
[NASA-CASE-GSC-11786-1] c 24 N76-24363
- Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c 35 N77-20400
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c 44 N78-25527
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186
- Improved thermal barrier coating system  
[NASA-CASE-LEW-13324-1] c 26 N82-26431
- Improved nickel base coating alloy --- oxidation resistant coatings  
[NASA-CASE-LEW-13834-1] c 26 N83-24639
- Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N84-20670
- Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005
- Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N86-19610
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550
- METAL COMPOUNDS**  
Phthalocyanine polymers  
[NASA-CASE-ARC-11413-1] c 27 N85-21348
- METAL CUTTING**  
Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c 15 N73-30460
- Vee-notching device --- with adjustable carriage  
[NASA-CASE-MFS-20730-1] c 39 N74-13131
- Hole cutter --- drill bits and rotating shaft  
[NASA-CASE-MFS-22649-1] c 37 N75-25186
- Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319

## METAL FATIGUE

- Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179
- METAL FIBERS**  
Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MS-C-12662-1] c 33 N79-12331
- METAL FILMS**  
Means and methods of depositing thin films on substrates Patent  
[NASA-CASE-XNP-00595] c 15 N70-34967
- Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-01765] c 18 N71-10772
- Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739
- Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-10337] c 15 N71-24046
- Magnetic recording head and method of making same Patent  
[NASA-CASE-GSC-10097-1] c 08 N71-27210
- Light regulator  
[NASA-CASE-LAR-10836-1] c 26 N72-27784
- Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c 27 N74-13270
- Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c 37 N75-19684
- Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436
- Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015
- Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394
- Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589
- Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N86-19610
- METAL FINISHING**  
Selective plating of etched circuits without removing previous plating Patent  
[NASA-CASE-XGS-03120] c 15 N71-24047
- Surface finishing --- for aircraft wings  
[NASA-CASE-MS-C-12631-1] c 24 N77-28225
- METAL FOILS**  
Folding apparatus Patent  
[NASA-CASE-XLA-00137] c 15 N70-33180
- Thermal control of space vehicles Patent  
[NASA-CASE-XLA-01291] c 33 N70-36617
- Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c 33 N71-24145
- Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c 44 N74-19692
- Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c 35 N76-18400
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470
- METAL FUELS**  
Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209
- METAL HALIDES**  
Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c 37 N76-18458
- Direct current ballast circuit for metal halide lamp  
[NASA-CASE-MS-C-18407-1] c 33 N82-24427
- High power metallic halide laser --- amplifying a copper chloride laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417
- METAL HYDRIDES**  
Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N78-13436
- METAL IONS**  
Metal containing polymers from cyclic tetrameric phenylphosphonitrilamides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206
- Process for improving mechanical properties of epoxy resins by addition of cobalt ions  
[NASA-CASE-LAR-13230-1] c 24 N84-34571
- METAL JOINTS**  
Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c 15 N70-41629
- Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170
- X-ray determination of parts alignment  
[NASA-CASE-MS-C-20418-1] c 74 N86-20126
- Tool and process for explosive joining of tubes  
[NASA-CASE-LAR-13309-1] c 37 N86-21858

**METAL MATRIX COMPOSITES**

- Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c 17 N70-33288
- Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142
- Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984
- Refractory metal base alloy composites  
[NASA-CASE-XLE-03940-2] c 17 N72-28536
- Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c 24 N75-28135
- Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171
- Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289
- Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419
- Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c 34 N80-24573
- Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c 24 N81-17170
- Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179
- Fuselage structure using advanced technology fiber reinforced composites  
[NASA-CASE-LAR-11688-1] c 24 N82-26384
- Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214
- Arc spray fabrication of metal matrix composite monolayer  
[NASA-CASE-LEW-13828-1] c 24 N85-30027

**METAL OXIDE SEMICONDUCTORS**

- Gyator employing field effect transistors  
[NASA-CASE-MFS-21433] c 09 N73-20232
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c 76 N74-20329
- Integrated P-channel MOS gyator  
[NASA-CASE-MFS-22343-1] c 33 N74-34638
- Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c 76 N75-25730
- Solar cell collector  
[NASA-CASE-LEW-12552-1] c 44 N78-25527
- Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c 76 N79-14906
- Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation  
[NASA-CASE-GSC-12515-1] c 33 N81-26360
- Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525
- Integrated photo-responsive metal oxide semiconductor circuit  
[NASA-CASE-GSC-12782-1] c 33 N83-13360
- High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177
- GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150

**METAL OXIDES**

- Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142
- Photoetching of metal-oxide layers  
[NASA-CASE-ERC-10108] c 06 N72-21094
- Production of metal powders  
[NASA-CASE-XLE-06461] c 17 N72-22530
- Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MSC-12408-1] c 46 N74-13011
- Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-1] c 26 N80-19237
- Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c 44 N83-10494
- Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388
- Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748
- Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266
- Oxidation protecting coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N86-26434
- Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569

**METAL PARTICLES**

- Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983
- Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729
- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209

**METAL PLATES**

- Detector panels-micrometeoroid impact Patent  
[NASA-CASE-XLA-05906] c 31 N71-16221
- Nuclear fuel elements  
[NASA-CASE-XLE-00209] c 22 N73-32528
- Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c 27 N76-14264
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492
- Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930

**METAL POWDER**

- Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468
- Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022
- Shock tube powder dispersing apparatus Patent  
[NASA-CASE-XLE-04946] c 17 N71-24911
- Preparation of high purity copper fluoride  
[NASA-CASE-LEW-10794-1] c 06 N72-17093
- Production of metal powders  
[NASA-CASE-XLE-06461] c 17 N72-22530
- Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c 17 N72-28535
- Peen plating  
[NASA-CASE-GSC-11163-1] c 15 N73-32360
- Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456

**METAL SHEETS**

- Light shield and infrared reflector for fatigue testing Patent  
[NASA-CASE-XLA-01782] c 14 N71-26136
- Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c 37 N74-11301
- Method of making an explosively welded scarf joint  
[NASA-CASE-LAR-11211-1] c 37 N75-12326
- Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c 37 N75-26371
- Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c 37 N75-27376
- Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340
- Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450

**METAL SHELLS**

- Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886

**METAL SPINNING**

- Spin forming tubular elbows Patent  
[NASA-CASE-XMF-01083] c 15 N71-22723

**METAL SPRAYING**

- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N84-20670
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550

**METAL STRIPS**

- Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411
- Interconnection of solar cells Patent  
[NASA-CASE-XGS-01475] c 03 N71-11058
- Method of making tubes Patent  
[NASA-CASE-XGS-04175] c 15 N71-18579
- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c 70 N74-21300

**METAL SURFACES**

- Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465
- Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830
- Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875
- Process for reducing secondary electron emission Patent  
[NASA-CASE-XNP-09469] c 24 N71-25555
- Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312
- Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c 33 N71-29151

- Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c 35 N74-22095
- Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077
- Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455
- Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188
- Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855
- Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N86-19610
- Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N86-32556

**METAL VAPOR LASERS**

- High power metallic halide laser --- amplifying a copper chloride laser  
[NASA-CASE-NPO-14782-1] c 36 N82-28616
- Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417

**METAL VAPORS**

- Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983
- Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c 15 N70-33382
- Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c 36 N75-32441
- Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477

**METAL WORKING**

- Electric arc welding Patent  
[NASA-CASE-XMF-00392] c 15 N70-34814
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17650
- Protective device for machine and metalworking tools Patent  
[NASA-CASE-XLE-01092] c 15 N71-22797
- Portable milling tool Patent  
[NASA-CASE-XMF-03511] c 15 N71-22799
- Extrusion die for refractory metals Patent  
[NASA-CASE-XLE-06773] c 15 N71-23817
- Magnetomotive metal working device Patent  
[NASA-CASE-XMF-03793] c 15 N71-24833
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-3] c 15 N71-24865
- Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c 37 N74-25968
- Apparatus for forming dished ion thruster grids  
[NASA-CASE-LEW-11694-2] c 37 N76-14461
- Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491

**METAL-METAL BONDING**

- Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443
- Honeycomb panel and method of making same Patent  
[NASA-CASE-XMF-01402] c 18 N71-21651
- Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c 37 N76-27568
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455
- Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170
- Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338

**METALLIC GLASSES**

- Glass compositions with a high modulus of elasticity --- nontoxic glass fibers  
[NASA-CASE-HQN-10274-1] c 27 N82-29451
- High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452

**METALLIZING**

- Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c 76 N79-14906
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N84-20670
- Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550

**METALLOGRAPHY**

- Method for etching copper Patent  
[NASA-CASE-XGS-06306] c 17 N71-16044

**METALLOSILOXANE POLYMER**

- Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058
- METALLURGY**  
Induction furnace with perforated tungsten foil shielding Patent  
[NASA-CASE-XLE-04026] c 14 N71-23267  
Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229
- METALS**  
Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226  
Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710  
Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811  
Forming tool for ribbon or wire  
[NASA-CASE-XLA-05966] c 15 N72-12408  
Peen plating  
[NASA-CASE-GSC-11163-1] c 15 N73-32360  
Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063  
Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c 31 N74-23065  
Production of pure metals  
[NASA-CASE-LEW-10906-1] c 25 N74-30502  
Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c 35 N76-15434  
Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482  
Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c 44 N79-11467  
Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884  
Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126  
Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MS-C-20622-1] c 25 N86-19413  
Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455  
Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680
- METASTABLE STATE**  
Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826  
Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374
- METEORITE COLLISIONS**  
Pressurized panel  
[NASA-CASE-XLA-08916-2] c 14 N73-28487  
Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c 91 N74-13130
- METEORITES**  
Method of making pressurized panel Patent  
[NASA-CASE-XLA-08916] c 15 N71-29018
- METEORITIC DAMAGE**  
Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent  
[NASA-CASE-XLE-01246] c 14 N71-10797
- METEOROID HAZARDS**  
Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c 35 N75-33367
- METEOROID PROTECTION**  
Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679
- METEOROIDS**  
Apparatus for photographing meteors  
[NASA-CASE-LAR-10226-1] c 14 N73-19419  
Meteoroid capture cell construction  
[NASA-CASE-MS-C-12423-1] c 91 N76-30131
- METEOROLOGICAL BALLOONS**  
Meteorological balloon Patent  
[NASA-CASE-XMF-04163] c 02 N71-23007
- METHANE**  
Gas lubricant compositions Patent  
[NASA-CASE-XLE-00353] c 18 N70-39897  
Amine terminated bisaspartimides, process for preparation thereof, and polymers thereof  
[NASA-CASE-ARC-11421-1] c 27 N84-16340

- Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631
- METHYL ALCOHOLS**  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255
- METHYL COMPOUNDS**  
Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280  
Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525
- METHYLENE**  
Carboranymethylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750  
Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N86-24840
- MICHELSON INTERFEROMETERS**  
Interferometer direction sensor Patent  
[NASA-CASE-NPO-10320] c 14 N71-17655  
Interferometer servo system Patent  
[NASA-CASE-NPO-10300] c 14 N71-17662  
Multispectral imaging system  
[NASA-CASE-MS-C-12404-1] c 23 N73-13661  
Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c 35 N78-18391  
Method and means for generation of tunable laser sidebands in the far-infrared region  
[NASA-CASE-NPO-16497-1-CU] c 36 N86-20779
- MICROANALYSIS**  
Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913
- MICROBALANCES**  
Null-type vacuum microbalance Patent  
[NASA-CASE-XAC-00472] c 15 N70-40180  
Microbalance --- for measuring particle mass  
[NASA-CASE-MS-C-11242] c 35 N78-17358
- MICROBALLOONS**  
Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442
- MICROBIOLOGY**  
Variable angle tube holder  
[NASA-CASE-LAR-10507-1] c 11 N72-25284  
Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c 35 N75-12272  
Automatic inoculating apparatus --- includes movable carriage, drive motor, and swabbing motor  
[NASA-CASE-LAR-11074-1] c 51 N75-13502  
Automatic microbial transfer device  
[NASA-CASE-LAR-11354-1] c 35 N75-27330  
Application of luciferase assay for ATP to antimicrobial drug susceptibility  
[NASA-CASE-GSC-12039-1] c 51 N77-22794  
Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698  
Flow through bacteria detection system  
[NASA-CASE-LAR-12871-1] c 35 N85-29218
- MICROCHANNELS**  
Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659
- MICROCRACKS**  
System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c 39 N80-10507  
Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996
- MICROELECTRONICS**  
Apparatus and method for separating a semiconductor wafer Patent  
[NASA-CASE-ERC-10138] c 26 N71-14354  
Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234  
Microelectronic module package Patent  
[NASA-CASE-XMS-02182] c 10 N71-28783  
Method of coating through-holes Patent  
[NASA-CASE-XMF-05999] c 15 N71-29032  
Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485  
Screened circuit capacitors  
[NASA-CASE-LAR-10294-1] c 26 N72-28762  
Active tuned circuit  
[NASA-CASE-GSC-11340-1] c 10 N72-33230  
Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c 38 N78-17396

- Method and apparatus for fabricating improved solar cell modules  
[NASA-CASE-NPO-14416-1] c 44 N81-14389  
Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709  
Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-15670-1] c 33 N82-33634  
Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884
- MICROFIBERS**  
Small conductive particle sensor --- microfiber size determination  
[NASA-CASE-LAR-12552-1] c 35 N82-11431
- MICROFILMS**  
Apparatus for inspecting microfilm Patent  
[NASA-CASE-MFS-20240] c 14 N71-26788
- MICROINSTRUMENTATION**  
Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c 37 N78-17386
- MICROMETEORITES**  
Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c 91 N74-13130  
Micrometeoroid velocity and trajectory analyzer  
[NASA-CASE-GSC-11892-1] c 35 N76-15433
- MICROMETEORIODS**  
Micrometeoroid velocity measuring device Patent  
[NASA-CASE-XLA-00495] c 14 N70-41332  
Force transducer Patent  
[NASA-CASE-XAC-01101] c 14 N70-41957  
Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996  
Detector panels-micrometeoroid impact Patent  
[NASA-CASE-XLA-05906] c 31 N71-16221  
Rotary bead dropper and selector for testing micrometeorite detectors Patent  
[NASA-CASE-XGS-03304] c 09 N71-22988  
Micrometeoroid penetration measuring device Patent  
[NASA-CASE-XLA-00941] c 14 N71-23240  
Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MS-C-12109] c 18 N71-26285  
Micrometeoroid analyzer  
[NASA-CASE-ARC-10443-1] c 14 N73-20477  
Meteoroid detector  
[NASA-CASE-LAR-10483-1] c 14 N73-32327  
Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c 35 N74-21062  
Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c 35 N78-18390
- MICROMETERS**  
Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c 37 N78-17386
- MICROMINIATURIZATION**  
Compensating radiometer  
[NASA-CASE-XLA-04556] c 14 N69-27484
- MICROORGANISMS**  
Bacteriostatic conformal coating and methods of application Patent  
[NASA-CASE-GSC-10007] c 18 N71-16046  
Vacuum probe surface sampler  
[NASA-CASE-LAR-10623-1] c 14 N73-30395  
Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c 35 N75-33368  
Biocontamination and particulate detection system  
[NASA-CASE-NPO-13953-1] c 35 N79-28527  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698  
Apparatus and process for microbial detection and enumeration  
[NASA-CASE-LAR-12709-1] c 35 N82-28604  
Flow through bacteria detection system  
[NASA-CASE-LAR-12871-1] c 35 N85-29218  
Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227
- MICROPARTICLES**  
Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c 06 N69-39936  
Powder fed sheared dispersal particle generator  
[NASA-CASE-LAR-12785-1] c 37 N84-16561
- MICROPHONES**  
Audio signal processor Patent  
[NASA-CASE-MS-C-12223-1] c 07 N71-26181  
Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234  
Wind tunnel microphone structure Patent  
[NASA-CASE-XNP-00250] c 11 N71-28779

- High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature  
[NASA-CASE-LAR-12375-1] c 32 N79-24203
- Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft  
[NASA-CASE-FRC-11072-1] c 05 N83-27975
- Carbon granule probe microphone for leak detection --- recovery boilers  
[NASA-CASE-NPO-16027-1] c 35 N85-21597
- MICROPROCESSORS**  
Microcomputerized electric field meter diagnostic and calibration system  
[NASA-CASE-KSC-11035-1] c 35 N78-28411
- Automatic multi-banking of memory for microprocessors  
[NASA-CASE-NPO-15295-1] c 60 N85-21992
- MICROSCOPES**  
Absolute focus lock for microscopes  
[NASA-CASE-LAR-10184] c 14 N72-22445
- Hand-held photomicroscope  
[NASA-CASE-ARC-10488-1] c 14 N73-33361
- Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N85-20250
- MICROSTRIP TRANSMISSION LINES**  
Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c 32 N78-24391
- Multiple band circularly polarized microstrip antenna  
[NASA-CASE-MSC-18334-1] c 32 N80-32604
- Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c 32 N82-11336
- MICROSTRUCTURE**  
Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride  
Patent  
[NASA-CASE-XLE-03940] c 18 N71-26153
- Refractory metal base alloy composites  
[NASA-CASE-XLE-03940-2] c 17 N72-28536
- Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c 37 N74-21055
- Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c 37 N75-26372
- Preparation of monotectic alloys having a controlled microstructure by directional solidification under dopant-induced interface breakdown  
[NASA-CASE-MFS-23816-1] c 26 N80-23419
- Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095
- Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N86-20587
- MICROTHRUST**  
Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213
- Heated porous plug microthruster  
[NASA-CASE-GSC-10640-1] c 28 N72-18766
- MICROWAVE AMPLIFIERS**  
Temperature-compensating means for cavity resonator of amplifier Patent  
[NASA-CASE-XNP-00449] c 14 N70-35220
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350
- MICROWAVE ANTENNAS**  
Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486
- Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c 07 N71-22750
- Omnidirectional microwave spacecraft antenna Patent  
[NASA-CASE-XLA-03114] c 09 N71-22888
- Validation device for spacecraft checkout equipment Patent  
[NASA-CASE-XKS-10543] c 07 N71-26292
- Multi-purpose antenna employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c 07 N72-25174
- Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c 09 N72-25247
- Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130
- Thin conformal antenna array for microwave power conversions  
[NASA-CASE-NPO-13886-1] c 32 N78-24391
- Cavity-backed, micro-strip dipole antenna array  
[NASA-CASE-MSC-18606-1] c 32 N82-11336
- MICROWAVE CIRCUITS**  
Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065
- Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348
- Laser activated MTOS microwave device  
[NASA-CASE-NPO-16112-1] c 33 N86-19516
- MICROWAVE COUPLING**  
Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c 09 N71-23548
- Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143
- MICROWAVE EQUIPMENT**  
Array phasing device Patent  
[NASA-CASE-ERC-10046] c 10 N71-18722
- Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808
- Dual frequency microwave reflex feed  
[NASA-CASE-NPO-13091-1] c 09 N73-12214
- Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c 33 N75-26245
- Refrigerated coaxial coupling --- for microwave equipment  
[NASA-CASE-NPO-13504-1] c 33 N75-30430
- Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c 33 N79-28416
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71-NPO-15494-2] c 35 N85-34373
- MICROWAVE FILTERS**  
High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c 07 N71-33606
- High-Q bandpass resonators utilizing bandstop resonator pairs  
[NASA-CASE-GSC-10990-1] c 09 N73-26195
- MICROWAVE FREQUENCIES**  
Varactor high level mixer  
[NASA-CASE-XGS-02171] c 09 N89-24324
- Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c 09 N71-18721
- Composite antenna feed  
[NASA-CASE-GSC-11046-1] c 07 N73-28013
- MICROWAVE OSCILLATORS**  
Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235
- Electron beam controller --- using magnetic field to refocus spent electron beam in microwave oscillator tube  
[NASA-CASE-LEW-11617-1] c 33 N74-10195
- MICROWAVE RADIOMETERS**  
Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774
- Electromagnetic power absorber  
[NASA-CASE-NPO-13830-1] c 32 N80-14281
- Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685
- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040
- System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443
- MICROWAVE REFLECTOMETERS**  
Reflectometer for receiver input impedance match measurement Patent  
[NASA-CASE-XNP-10843] c 07 N71-11267
- Microwave flaw detector Patent  
[NASA-CASE-ARC-10009-1] c 15 N71-17822
- MICROWAVE RESONANCE**  
Dual resonant cavity absorption cell Patent  
[NASA-CASE-LAR-10305] c 14 N71-26137
- MICROWAVE SWITCHING**  
Gyrator type circuit Patent  
[NASA-CASE-XAC-10608-1] c 09 N71-12517
- Microwave switching power divider --- antenna feeds  
[NASA-CASE-GSC-12420-1] c 33 N82-16340
- MICROWAVE TRANSMISSION**  
Frequency translating phase conjugation circuit for active retrodirective antenna array --- microwave transmission  
[NASA-CASE-NPO-14536-1] c 32 N81-14185
- Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c 32 N83-27085
- MICROWAVE TUBES**  
Electrostatic collector for charged particles  
[NASA-CASE-LEW-11192-1] c 09 N73-13208
- MICROWAVES**  
Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c 09 N71-23598
- Method and apparatus for optical modulating a light signal Patent  
[NASA-CASE-GSC-10216-1] c 23 N71-26722
- Waveguide mixer  
[NASA-CASE-ERC-10179] c 07 N72-20141
- Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c 44 N74-19870
- Wide power range microwave feedback controller  
[NASA-CASE-GSC-12146-1] c 33 N78-32340
- Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287
- Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c 32 N84-22820
- Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N85-20248
- Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118
- MIDAIR COLLISIONS**  
Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641
- MILLIMETER WAVES**  
Millimeter wave antenna system Patent Application  
[NASA-CASE-GSC-10949-1] c 07 N71-28965
- Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c 33 N74-32660
- MILLING (MACHINING)**  
Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-22722
- Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319
- Method for milling and drilling glass  
[NASA-CASE-GSC-12636-1] c 31 N83-27058
- MILLING MACHINES**  
Electro-optical alignment control system Patent  
[NASA-CASE-XMF-00908] c 14 N70-40238
- Portable milling tool Patent  
[NASA-CASE-XMF-03511] c 15 N71-22799
- Grinding arrangement for ball nose milling cutters  
[NASA-CASE-LAR-10450-1] c 37 N74-27905
- MINERAL DEPOSITS**  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 31 N78-24387
- Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 43 N81-26509
- MINERAL METABOLISM**  
Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c 52 N77-14737
- MINIATURE ELECTRONIC EQUIPMENT**  
Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091
- Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597
- Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894
- Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c 35 N77-14407
- Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295
- MINIATURIZATION**  
Miniature vibration isolator Patent  
[NASA-CASE-XLA-01019] c 15 N70-40156
- Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897
- Miniature carbon dioxide sensor and methods  
[NASA-CASE-MSC-13332-1] c 14 N72-21408
- Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397
- Miniature cyclotron resonance ion source using small permanent magnet  
[NASA-CASE-NPO-14324-1] c 72 N80-27163
- Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288
- MINING**  
Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 31 N78-24387
- Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423
- Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c 43 N80-23711
- Underground mineral extraction  
[NASA-CASE-NPO-14140-1] c 43 N81-26509
- Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768
- Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722
- MINORITY CARRIERS**  
Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888
- MIRRORS**  
Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c 11 N69-24321
- Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461

- Interferometer servo system Patent  
[NASA-CASE-NPO-10300] c 14 N71-17662
- Method and apparatus for stabilizing a gaseous optical maser Patent  
[NASA-CASE-XGS-03644] c 16 N71-18614
- Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868
- Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123
- Optical range finder having nonoverlapping complete images  
[NASA-CASE-MS-12105-1] c 14 N72-21409
- Optical system support apparatus  
[NASA-CASE-XER-07896-2] c 23 N72-22673
- Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c 35 N75-12273
- Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MS-12611-1] c 12 N76-15189
- Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c 74 N78-15880
- Interferometer mirror tilt correcting system  
[NASA-CASE-NPO-13687-1] c 35 N78-18391
- Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c 89 N79-10969
- Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248
- Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N85-20868
- Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124
- Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732
- Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138
- MIS (SEMICONDUCTORS)**  
Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c 44 N82-32841
- MISSILE CONTROL**  
Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864
- MISSILE LAUNCHERS**  
Missile launch release system Patent  
[NASA-CASE-XMF-03198] c 30 N70-40353
- Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175
- Controlled release device Patent  
[NASA-CASE-XKS-03338] c 15 N71-24043
- MISSILE STRUCTURES**  
Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231
- MISSILES**  
Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168
- Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100
- MITOSIS**  
Process for control of cell division  
[NASA-CASE-LAR-10773-3] c 51 N77-25769
- MIXERS**  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067
- Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1CU] c 35 N86-26598
- Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589
- MIXING**  
Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589
- MIXING CIRCUITS**  
Varactor high level mixer  
[NASA-CASE-XGS-02171] c 09 N69-24324
- Waveguide mixer  
[NASA-CASE-ERC-10179] c 07 N72-20141
- MIXTURES**  
Low gravity phase separator  
[NASA-CASE-MS-14773-1] c 35 N78-12390
- Process for producing tris (s(n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280
- High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1-SB] c 24 N85-30033
- MOBILITY**  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c 33 N75-27251
- Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217
- Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N86-21147

**MODE TRANSFORMERS**

- Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c 09 N69-39984
- Dual waveguide mode source having control means for adjusting the relative amplitude of two modes Patent  
[NASA-CASE-XNP-03134] c 07 N71-10676
- Direct current transformer  
[NASA-CASE-MFS-23659-1] c 33 N79-17133

**MODEMS**

- Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314

**MODES (STANDING WAVES)**

- Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N82-27086

**MODULATION**

- Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c 33 N74-17930
- Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381
- Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410
- Modulated voltage metastable ionization detector  
[NASA-CASE-ARC-11503-1] c 35 N85-34374

**MODULATORS**

- Retrodiffractive optical system  
[NASA-CASE-XGS-04480] c 16 N69-27491
- Retrodiffractive modulator Patent  
[NASA-CASE-GSC-10062] c 14 N71-15605
- Laser calibrator Patent  
[NASA-CASE-XLA-03410] c 16 N71-25914
- Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c 33 N74-14939
- Charge storage diode modulators and demodulators  
[NASA-CASE-NPO-10189-1] c 33 N77-21314
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589
- Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546
- Solar energy modulator  
[NASA-CASE-NPO-15388-1] c 44 N84-28203

**MODULES**

- Modular encoder  
[NASA-CASE-NPO-10629] c 08 N72-18184
- Solar cell module assembly jig  
[NASA-CASE-XGS-00829-1] c 44 N79-19447
- Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550
- Shuttle-launch triangular space station  
[NASA-CASE-MS-20676-1] c 18 N86-24729

**MODULUS OF ELASTICITY**

- Glass compositions with a high modulus of elasticity --- nontoxic glass fibers  
[NASA-CASE-HQN-10274-1] c 27 N82-29451
- High modulus invert analog glass compositions containing beryllia  
[NASA-CASE-HQN-10931-2] c 27 N82-29452
- Non-toxic invert analog glass compositions of high modulus  
[NASA-CASE-HQN-10328-2] c 27 N82-29454
- High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455
- High resistance and raised modulus carbon fibers  
[NASA-TM-76884] c 24 N85-25436

**MOISTURE**

- Gas purged dry box glove Patent  
[NASA-CASE-XLE-02531] c 05 N71-23080
- Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212

**MOISTURE CONTENT**

- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484
- Moisture content and gas sampling device  
[NASA-CASE-MS-18866-1] c 35 N85-29213
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA 1.71-NPO-15494-2] c 35 N85-34373

**MOISTURE METERS**

- Method of evaluating moisture barrier properties of encapsulating materials Patent  
[NASA-CASE-NPO-10051] c 18 N71-24934
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA 1.71-NPO-15494-2] c 35 N85-34373
- Ice detector  
[NASA-CASE-LAR-13403-1] c 03 N86-24673

**MOISTURE RESISTANCE**

- Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282

**MOLDING MATERIALS**

- Method for molding compounds Patent  
[NASA-CASE-XLA-01091] c 15 N71-10672
- Method of making a molded connector Patent  
[NASA-CASE-XMF-03498] c 15 N71-15986
- Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975
- Hydroforming techniques using epoxy molds Patent  
[NASA-CASE-XLE-05641-1] c 15 N71-26346
- Molding process for imidazopyrrolone polymers  
[NASA-CASE-LAR-10547-1] c 31 N74-13177
- Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c 31 N74-14133
- Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275
- Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c 20 N79-21123

**MOLDS**

- Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836
- Technique of duplicating fragile core  
[NASA-CASE-XLA-07829] c 15 N72-16329
- Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c 31 N74-14133
- Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c 31 N74-32920
- Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c 31 N75-13111
- Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c 37 N76-23570

**MOLECULAR BEAMS**

- Molecular beam velocity selector Patent  
[NASA-CASE-XLE-01533] c 11 N71-10777
- Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c 20 N74-31269

**MOLECULAR CHAINS**

- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104

**MOLECULAR GASES**

- Compact hydrogenator  
[NASA-CASE-NPO-11682-1] c 35 N74-15127

**MOLECULAR PUMPS**

- Omni-directional anisotropic molecular trap Patent  
[NASA-CASE-XGS-00783] c 30 N71-17788
- Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294

**MOLECULAR RELAXATION**

- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887

**MOLECULAR ROTATION**

- Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426

**MOLECULAR SPECTRA**

- Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705

**MOLECULAR SPECTROSCOPY**

- Dual resonant cavity absorption cell Patent  
[NASA-CASE-LAR-10305] c 14 N71-26137

**MOLECULAR WEIGHT**

- Structural pressure sensitive silicone adhesives  
[NASA-CASE-LAR-13270-1] c 27 N84-32532
- Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456
- Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N86-25477

**MOLECULES**

- Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826

**MOLTEN SALT ELECTROLYTES**

- Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904
- Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c 44 N76-18643

**MOLTEN SALTS**

- Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261

**MOLYBDENUM**

- Thermocouples of molybdenum and indium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346



**MOLYBDENUM CARBIDES**

Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077

**MOLYBDENUM DISULFIDES**

Atomic hydrogen storage method and apparatus  
[NASA-CASE-LEW-12081-3] c 28 N81-14103

**MOMENTS OF INERTIA**

Moment of inertia test fixture Patent  
[NASA-CASE-XGS-01023] c 14 N71-22992

**MOMENTUM**

Attitude control and damping system for spacecraft Patent  
[NASA-CASE-XLA-02551] c 21 N71-21708  
Particle detection apparatus including a ballistic pendulum Patent  
[NASA-CASE-XMS-04201] c 14 N71-22990

**MONATOMIC GASES**

Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402

**MONITORS**

Leak detector Patent  
[NASA-CASE-LAR-10323-1] c 12 N71-17573  
Reduced bandwidth video communication system utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c 07 N71-23026  
Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175  
Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862  
Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225  
Dropout monitoring probe  
[NASA-CASE-NPO-10985] c 14 N73-20478  
Automatic lightning detection and photographic system  
[NASA-CASE-KSC-10728-1] c 14 N73-32319  
Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304  
Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698  
Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272  
Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139  
Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117  
Laser Schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N85-30932  
Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266

**MONOCHROMATIC RADIATION**  
Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c 25 N72-24753  
Laser extensometer  
[NASA-CASE-MFS-19259-1] c 36 N78-14380  
Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900

**MONOCHROMATORS**  
Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c 06 N71-13461  
Color television system  
[NASA-CASE-MS-12146-1] c 07 N72-17109

**MONOMERS**  
Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c 35 N78-17359  
Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256  
Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160  
Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854  
Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-1] c 27 N84-27885  
Process for preparing highly optically transparent colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N85-21360

Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727

**MONOPOLE ANTENNAS**

Antenna system using parasitic elements and two driven elements at 90 deg angle fed 180 deg out of phase Patent  
[NASA-CASE-XLA-00414] c 07 N70-38200  
Flexible blade antenna Patent  
[NASA-CASE-MS-12101] c 09 N71-18720

**MONOPROPELLANTS**

Ignition system for monopropellant combustion devices Patent  
[NASA-CASE-XNP-00249] c 28 N70-38249  
Ignition means for monopropellant Patent  
[NASA-CASE-XNP-00876] c 28 N70-41311  
Low thrust monopropellant engine  
[NASA-CASE-GSC-12194-2] c 20 N82-18314

**MONOPULSE ANTENNAS**

Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460  
Low noise single aperture multimode monopulse antenna feed system Patent  
[NASA-CASE-XNP-01735] c 07 N71-22750  
Electronic scanning of 2-channel monopulse patterns Patent  
[NASA-CASE-GSC-10299-1] c 09 N71-24804  
Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472

**MONOPULSE RADAR**

Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864  
Monopulse tracking system Patent  
[NASA-CASE-XGS-01155] c 10 N71-21483

**MONOSTABLE MULTIVIBRATORS**

Resetable monostable pulse generator Patent  
[NASA-CASE-GSC-11139] c 09 N71-27016  
Monostable multivibrator with complementary NOR gates Patent  
[NASA-CASE-MS-13492-1] c 10 N71-28860

**MORPHOLOGY**

Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800

**MOSSBAUER EFFECT**

Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c 35 N74-15091  
Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-XMF-05882] c 35 N75-27329

**MOTION**

Quick attach mechanism Patent  
[NASA-CASE-XFR-05421] c 15 N71-22994

**MOTION PICTURES**

Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c 35 N74-17153  
Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c 35 N75-27328

**MOTION SIMULATORS**

Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c 09 N75-15662  
Helmet weight simulator  
[NASA-CASE-LAR-12320-1] c 54 N81-27806

**MOTION STABILITY**

Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658

**MOTORS**

Nonmagnetic thermal motor for a magnetometer  
[NASA-CASE-XAR-03786] c 09 N69-21313  
System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent  
[NASA-CASE-XMF-06892] c 09 N71-24805  
Mechanical thermal motor  
[NASA-CASE-MFS-23062-1] c 37 N77-12402  
Redundant motor drive system  
[NASA-CASE-MFS-23771-1] c 37 N80-32716

**MOUNTING**

Thermobulb mount Patent  
[NASA-CASE-NPO-10158] c 33 N71-16356  
Mount for thermal control system Patent  
[NASA-CASE-NPO-10138] c 33 N71-16357  
Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813  
Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c 10 N73-25243  
Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c 37 N75-30562  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c 19 N76-22284  
Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500  
Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468

Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c 35 N80-20560  
Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft  
[NASA-CASE-FRC-11072-1] c 05 N83-27975  
Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443  
Clamp-mount device  
[NASA-CASE-MFS-25510-1] c 37 N84-16560  
Model mount system for testing flutter  
[NASA-CASE-LAR-12950-1] c 09 N84-34448  
Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N86-24993  
Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1] c 09 N86-31594

**MOVING TARGET INDICATORS**

Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c 32 N74-12912  
Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359

**MULTIBEAM ANTENNAS**

Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918

**MULTICHANNEL COMMUNICATION**

Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420  
Phase quadrature-plural channel data transmission system Patent  
[NASA-CASE-XAC-06302] c 08 N71-19763  
Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012  
Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625  
Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MS-14180-1] c 52 N76-14757  
Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c 74 N79-34011

**MULTILAYER INSULATION**

Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022  
Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351  
Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186  
Method of making an insulation foil  
[NASA-CASE-LEW-11484-1] c 24 N75-33181  
Multiwall thermal protection system  
[NASA-CASE-LAR-12620-1] c 24 N82-32417

**MULTIPACTOR DISCHARGES**

High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c 33 N80-18285

**MULTIPATH TRANSMISSION**

Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c 32 N77-10392  
Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415

**MULTIPLE BEAM INTERVAL SCANNERS**

Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854  
Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c 32 N76-18295

**MULTIPLE DOCKING ADAPTERS**

Expanding center probe and drogue Patent  
[NASA-CASE-XMS-03613] c 31 N71-18346

**MULTIPLE OUTPUT PROGRAMS**

Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NPO-13422-1] c 60 N76-14818

**MULTIPLEXING**

Doppler frequency spread correction device for multiplex transmissions  
[NASA-CASE-XGS-02749] c 07 N69-39978  
Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-XNP-01306] c 07 N71-20814  
Satellite interface synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149  
Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171  
Data multiplexer using tree switching configuration  
[NASA-CASE-NPO-11333] c 08 N72-22162  
Television multiplexing system  
[NASA-CASE-KSC-10654-1] c 07 N73-30115



- Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NPO-13321-1] c 32 N75-26195
- Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c 33 N75-26243
- System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c 74 N77-18893
- Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c 74 N78-14889
- System for a displaying at a remote station data generated at a central station and for powering the remote station from the central station  
[NASA-CASE-GSC-12411-1] c 33 N81-14221
- Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278
- High-speed multiplexing of keyboard data inputs  
[NASA-CASE-NPO-14554-1] c 60 N81-27814
- Multi-channel temperature measurement amplification system --- solar heating systems  
[NASA-CASE-MFS-23775-1] c 44 N82-16474
- Apparatus and method for tracking the fundamental frequency of an analog input signal  
[NASA-CASE-ARC-11367-1] c 33 N83-21238
- Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590
- Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705
- LDV multiplexer interface  
[NASA-CASE-ARC-11536-1] c 33 N85-30202
- MULTIPLIERS**  
Pulse-width modulation multiplier Patent  
[NASA-CASE-XER-09213] c 07 N71-12390
- Variable pulse width multiplier Patent  
[NASA-CASE-XLA-02850] c 09 N71-20447
- Capacitance multiplier and filter synthesizing network  
[NASA-CASE-NPO-11948-1] c 33 N74-32712
- Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c 33 N78-32341
- MULTISPECTRAL BAND SCANNERS**  
Optical process for producing classification maps from multispectral data  
[NASA-CASE-MSC-14472-1] c 43 N77-10584
- Interactive color display for multispectral imagery using correlation clustering  
[NASA-CASE-MSC-16253-1] c 32 N79-20297
- Multispectral scanner optical system  
[NASA-CASE-MSC-18255-1] c 74 N80-33210
- Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783
- Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248
- MULTISPECTRAL LINEAR ARRAYS**  
Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403
- Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 35 N84-25016
- Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650
- MULTISPECTRAL PHOTOGRAPHY**  
Multispectral imaging system  
[NASA-CASE-MSC-12404-1] c 23 N73-13661
- Optical process for producing classification maps from multispectral data  
[NASA-CASE-MSC-14472-1] c 43 N77-10584
- Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288
- Interactive color display for multispectral imagery using correlation clustering  
[NASA-CASE-MSC-16253-1] c 32 N79-20297
- MULTISPECTRAL TRACKING TELESCOPES**  
Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459
- MULTISTAGE ROCKET VEHICLES**  
Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176
- Steerable solid propellant rocket motor Patent  
[NASA-CASE-XNP-00234] c 28 N70-38645
- Multi-mission module Patent  
[NASA-CASE-XMF-01543] c 31 N71-17730
- Single action separation mechanism Patent  
[NASA-CASE-XLA-00188] c 15 N71-22874
- Lateral displacement system for separated rocket stages Patent  
[NASA-CASE-XLA-04804] c 31 N71-23008
- Frangible link  
[NASA-CASE-MSC-11849-1] c 15 N72-22488
- Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787

**MULTIVIBRATORS**

- Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819
- Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c 09 N70-38604
- Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995
- High efficiency multivibrator Patent  
[NASA-CASE-XAC-00942] c 10 N71-16042
- A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c 10 N71-18723
- Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
[NASA-CASE-ARC-10137-1] c 09 N71-28468
- Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570

**MUSCLES**

- Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329
- Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703

**MUSCULAR FUNCTION**

- Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072

**MUSCULOSKELETAL SYSTEM**

- Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738

**MYOCARDIUM**

- Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072

**MYOPIA**

- Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193

**N****N-TYPE SEMICONDUCTORS**

- Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321

**NACELLES**

- Inlet deflector for jet engines Patent  
[NASA-CASE-XLE-00388] c 28 N70-34788
- Nacelle afterbody for jet engines Patent  
[NASA-CASE-XLA-10450] c 28 N71-21493
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c 07 N78-18066
- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096

**NASA PROGRAMS**

- Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474

**NAVIGATION**

- Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288

**NAVIGATION AIDS**

- Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c 04 N76-20114
- Ruler for making navigational computations  
[NASA-CASE-XNP-01458] c 04 N78-17031
- System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075
- Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132
- Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c 04 N84-27713

**NAVIGATION INSTRUMENTS**

- Sun angle calculator  
[NASA-CASE-MSC-12617-1] c 35 N76-29552
- Improved flux-gate magnetometer  
[NASA-CASE-LAR-13560-1] c 35 N86-32701

**NAVIGATION SATELLITES**

- Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948

**NEAR INFRARED RADIATION**

- Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c 14 N73-30389

**NEGATIVE FEEDBACK**

- Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c 09 N71-23015
- Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335

**NEGATIVE IONS**

- Generation of intense negative ion beams  
[NASA-CASE-NPO-16061-1-CU] c 72 N85-29701

**NEODYMIUM LASERS**

- Length controlled stabilized mode-lock ND:YAG laser  
[NASA-CASE-GSC-11571-1] c 36 N77-25499

**NERVES**

- Implantable electrical device  
[NASA-CASE-GSC-12560-1] c 52 N82-29863

**NETWORK SYNTHESIS**

- Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c 09 N71-24595
- High speed phase detector Patent  
[NASA-CASE-XNP-01306-2] c 09 N71-24596
- Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421

**NEUROGLIA**

- Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738

**NEUROLOGY**

- Implantable electrical device  
[NASA-CASE-GSC-12560-1] c 52 N82-29863

**NEUTRALIZERS**

- Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c 33 N77-10429
- Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039

**NEUTRON EMISSION**

- Deuterium pass through target --- neutron emitting target  
[NASA-CASE-LEW-11866-1] c 72 N76-15860

**NICKEL**

- Process for producing dispersion strengthened nickel with aluminum Patent  
[NASA-CASE-XLE-06969] c 17 N71-24142
- Selective nickel deposition  
[NASA-CASE-LEW-10965-1] c 15 N72-25452
- Brazing alloy composition  
[NASA-CASE-XMF-06053] c 26 N75-27126
- Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171
- Directionally solidified eutectic gamma-gamma nickel-base superalloys  
[NASA-CASE-LEW-12905-1] c 26 N78-18183
- Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734
- Metal (2,4,4',4',4'') phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281
- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267

**NICKEL ALLOYS**

- High temperature nickel-base alloy Patent  
[NASA-CASE-XLE-00151] c 17 N70-33283
- Nickel-base alloy Patent  
[NASA-CASE-XLE-00283] c 17 N70-36616
- Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent  
[NASA-CASE-XLE-02082] c 17 N71-16026
- Nickel base alloy  
[NASA-CASE-LEW-10874-1] c 17 N72-22535
- Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c 37 N74-21055
- Method of heat treating age-hardenable alloys  
[NASA-CASE-XNP-01311] c 26 N75-29236
- Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c 26 N77-20201
- Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279
- Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c 26 N77-32280
- Nical ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505
- Improved nickel base coating alloy --- oxidation resistant coatings  
[NASA-CASE-LEW-13834-1] c 26 N83-24639
- Heat treatment for superalloy  
[NASA-CASE-LEW-14262-1] c 26 N86-26414

**NICKEL CADMIUM BATTERIES**

- Heat flow calorimeter --- measures output of Ni-Cd batteries  
[NASA-CASE-GSC-11434-1] c 34 N74-27859
- Method and apparatus for conditioning of nickel-cadmium batteries  
[NASA-CASE-MFS-23270-1] c 44 N78-25531

**NICKEL COATINGS**

- Nickel aluminide coated low alloy stainless steel  
[NASA-CASE-LEW-11267-1] c 17 N73-32414

Selective coating for solar panels --- using black chrome and black nickel  
[NASA-CASE-LEW-12159-1] c 44 N78-19599

**NICKEL COMPOUNDS**  
Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10808  
Braze alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127

**NICKEL HYDROGEN BATTERIES**  
Oxygen recombination in individual pressure vessel nickel-hydrogen batteries  
[NASA-CASE-LEW-13822-1] c 44 N86-25874

**NICKEL PLATE**  
Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830

**NICKEL ZINC BATTERIES**  
Additive for zinc electrodes --- electric automobiles  
[NASA-CASE-LEW-13286-1] c 33 N84-14422

**NIObIUM**  
Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808

**NIObIUM COMPOUNDS**  
Method of producing high T superconducting NbN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N86-21401

**NITRAMINE PROPELLANTS**  
Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c 28 N78-31255

**NITRATES**  
Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-1] c 26 N80-19237

**NITRIC OXIDE**  
Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298

**NITRIDES**  
Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415  
Method of producing high T superconducting NbN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N86-21401

**NITRIDING**  
Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N86-32556

**NITRILES**  
Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562  
Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c 27 N78-15276  
Process for preparing phthalocyanine polymers  
[NASA-CASE-ARC-11511-1] c 23 N84-16259  
Process for preparing phthalocyanine polymers  
[NASA-CASE-ARC-11511-2] c 27 N86-18461

**NITRO COMPOUNDS**  
Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096  
The 1 - (dialkoxyposphonyl)methyl -2,4- and -2,6-dinitro- and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-1] c 23 N83-28076

**NITROAMINES**  
Intumescent paints Patent  
[NASA-CASE-ARC-10099-1] c 18 N71-15469  
Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c 06 N72-25147

**NITROGEN**  
III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409

**NITROGEN COMPOUNDS**  
Method for preparing addition type polyimide prepreps  
[NASA-CASE-LAR-12054-2] c 27 N81-14078

**NITROGEN OXIDES**  
Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497  
Combustor --- low nitrogen oxide formation  
[NASA-CASE-NPO-13958-1] c 25 N79-11151

**NITROGEN TETROXIDE**  
Procedure and apparatus for determination of water in nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094

**NITROGUANIDINE**  
Hydrazinium nitroformate propellant stabilized with nitroguanidine  
[NASA-CASE-NPO-12000] c 27 N72-25699

**NOBLE METALS**  
GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150

**NODES (STANDING WAVES)**  
System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516

**NOISE GENERATORS**

Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c 35 N75-21582  
Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426  
Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N86-26575

**NOISE METERS**  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614  
Differential sound level meter  
[NASA-CASE-LAR-12106-1] c 71 N78-14867  
Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445

**NOISE REDUCTION**

Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332  
Casagrainian antenna subreflector flange for suppressing ground noise Patent  
[NASA-CASE-XNP-00683] c 09 N70-35425  
Device for suppressing sound and heat produced by high-velocity exhaust jets Patent  
[NASA-CASE-XMF-01813] c 28 N70-41582  
Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964  
Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001  
Audio signal processor Patent  
[NASA-CASE-MSC-12223-1] c 07 N71-26181  
Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26268  
Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence  
[NASA-CASE-GSC-11133-1] c 23 N72-11568  
Audio system with means for reducing noise effects  
[NASA-CASE-NPO-11631] c 10 N73-12244  
Gas turbine exhaust nozzle --- for noise reduction  
[NASA-CASE-LEW-11569-1] c 07 N74-15453  
Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10941-1] c 37 N74-21057  
Jet exhaust noise suppressor  
[NASA-CASE-LEW-11286-1] c 07 N74-27490  
Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c 07 N74-28226  
Variably positioned guide vanes for aerodynamic choking  
[NASA-CASE-LAR-10642-1] c 07 N74-31270  
Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c 07 N74-32418  
Abating exhaust noises in jet engines  
[NASA-CASE-ARC-10712-1] c 07 N74-33218  
Television noise reduction device  
[NASA-CASE-MSC-12607-1] c 32 N75-21485  
Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11874-1] c 07 N76-18117  
Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c 09 N76-23273  
Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MSC-12640-1] c 74 N76-31998  
Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055  
Magneto-optic detection system with noise cancellation  
[NASA-CASE-NPO-11954-1] c 35 N78-29421  
Totally confined explosive welding  
[NASA-CASE-LAR-10941-2] c 37 N79-13364  
Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c 71 N79-14871  
Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c 05 N80-14107  
Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c 32 N80-32605  
Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999  
Multiple pure tone elimination strut assembly --- air breathing engines  
[NASA-CASE-FRC-11062-1] c 71 N82-16800  
Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235  
Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884

Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873  
Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c 35 N84-33769  
Comparator with noise suppression  
[NASA-CASE-LAR-13151-1] c 33 N85-20247

**NOISE TEMPERATURE**  
Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774

**NOISE THRESHOLD**  
Frequency modulation demodulator threshold extension device Patent  
[NASA-CASE-MSC-12165-1] c 07 N71-33696

**NONADIABATIC CONDITIONS**  
Direct heating surface combustor  
[NASA-CASE-LEW-11877-1] c 34 N78-27357

**NONDESTRUCTIVE TESTS**  
Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c 15 N71-18613  
Space simulator Patent  
[NASA-CASE-NPO-10141] c 11 N71-24964  
Apparatus for inspecting microfilm Patent  
[NASA-CASE-MFS-20240] c 14 N71-26788  
Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170  
Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993  
Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c 35 N75-25124  
Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c 38 N76-28563  
Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c 35 N78-24515  
Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c 38 N78-32447  
Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126  
Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-163371-1] c 33 N85-20251  
Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279  
Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276

**NONEQUILIBRIUM CONDITIONS**  
Condition sensor system and method  
[NASA-CASE-MSC-14805-1] c 54 N78-32720

**NONEQUILIBRIUM PLASMAS**  
Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c 25 N86-39884

**NONEQUILIBRIUM RADIATION**  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920

**NONFLAMMABLE MATERIALS**  
Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562  
Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405  
High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11536-1-SB] c 24 N85-30033

**NONLINEAR FEEDBACK**  
Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523  
Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c 33 N76-14373

**NONLINEAR FILTERS**  
Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493

**NONLINEAR SYSTEMS**  
Phase detector assembly Patent  
[NASA-CASE-XMF-00701] c 09 N70-40272  
Nonlinear analog-to-digital converter Patent  
[NASA-CASE-XAC-04031] c 08 N71-18594  
Split range transducer  
[NASA-CASE-XLA-11189] c 10 N72-20222  
Contour measurement system  
[NASA-CASE-MFS-23726-1] c 43 N79-26439

**NORMAL DENSITY FUNCTIONS**  
Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932

## NOSE CONES

- Automatically deploying nozzle exit cone extension Patent  
[NASA-CASE-XLE-01640] c 31 N71-15637  
Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984

## NOSE WHEELS

- Nose gear steering system for vehicle with main skids Patent  
[NASA-CASE-XLA-01804] c 02 N70-34160

## NOTCH STRENGTH

- Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583

## NOTCH TESTS

- Vee-notching device --- with adjustable carriage  
[NASA-CASE-MFS-20730-1] c 39 N74-13131  
Notch filter  
[NASA-CASE-MFS-23303-1] c 32 N77-18307

## NOTCHES

- Notch filter  
[NASA-CASE-MFS-23303-1] c 32 N77-18307

## NOZZLE DESIGN

- Annular rocket motor and nozzle configuration Patent  
[NASA-CASE-XLE-00078] c 28 N70-33284  
Penshape exhaust nozzle for supersonic engine Patent  
[NASA-CASE-XLE-00057] c 28 N70-38711  
Telescoping-spike supersonic inlet for aircraft engines Patent  
[NASA-CASE-XLE-00005] c 28 N70-39899  
Automatically deploying nozzle exit cone extension Patent  
[NASA-CASE-XLE-01640] c 31 N71-15637  
Injector assembly for liquid fueled rocket engines Patent  
[NASA-CASE-XMF-00968] c 28 N71-15660  
Collapsible nozzle extension for rocket engines Patent  
[NASA-CASE-MFS-11497] c 28 N71-16224  
Gas turbine combustion apparatus Patent  
[NASA-CASE-XLE-103477-1] c 28 N71-20330  
Prestressed refractory structure Patent  
[NASA-CASE-XNP-02888] c 18 N71-21068  
Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c 31 N74-23065  
Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055  
Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097  
Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392  
Sandblasting nozzle  
[NASA-CASE-NPO-13823-1] c 37 N81-25371  
Controlled overspray spray nozzle  
[NASA-CASE-MFS-25139-1] c 34 N82-13376

## NOZZLE FLOW

- Control system for rocket vehicles Patent  
[NASA-CASE-XLA-01163] c 21 N71-15582  
Aerodynamic spike nozzle Patent  
[NASA-CASE-XGS-01143] c 31 N71-15647  
Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339  
Tertiary flow injection thrust vectoring system Patent  
[NASA-CASE-MFS-20831] c 28 N71-29153  
Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c 09 N78-31129

## NOZZLE GEOMETRY

- Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c 20 N79-21123

## NOZZLE INSERTS

- Self-sealing, unbonded, rocket motor nozzle closure Patent  
[NASA-CASE-XLA-02651] c 28 N70-41967  
Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088

## NUCLEAR EXPLOSION EFFECT

- Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852

## NUCLEAR FUEL ELEMENTS

- Nuclear fuel elements  
[NASA-CASE-XLE-00209] c 22 N73-32528

## NUCLEAR MAGNETIC RESONANCE

- Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266

## NUCLEAR POWER PLANTS

- Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046

## NUCLEAR PUMPED LASERS

- Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c 36 N79-18307

## NUCLEAR PUMPING

- Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415

## NUCLEAR REACTOR CONTROL

- Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597  
Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913

## NUCLEAR REACTORS

- Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c 73 N77-18891  
High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179  
Jet pump-drive system for heat removal  
[NASA-CASE-NPO-16494-1-CU] c 34 N85-29182

## NUCLEATE BOILING

- Method of improving heat transfer characteristics in a nucleate boiling process Patent  
[NASA-CASE-XMS-04268] c 33 N71-16277

## NULL ZONES

- Null device for hand controller Patent  
[NASA-CASE-XLA-01808] c 15 N71-20740

## NUMBER THEORY

- Binary concatenated coding system  
[NASA-CASE-MSC-14082-1] c 60 N76-23850

## NUMERICAL ANALYSIS

- Method of and apparatus for generating an interstitial point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701

## NUMERICAL CONTROL

- Fringe counter for interferometers Patent  
[NASA-CASE-LAR-10204] c 14 N71-27215  
Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349  
Controller for computer control of brushless dc motors --- automobile engines  
[NASA-CASE-NPO-13970-1] c 33 N81-20352  
Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c 60 N82-29013  
Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681  
Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790

## NUMERICAL INTEGRATION

- Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437

## NUTATION

- Method and means for damping nutation in a satellite Patent  
[NASA-CASE-XMF-00442] c 31 N71-10747  
Nutation damper  
[NASA-CASE-GSC-11205-1] c 15 N73-25513

## NUTATION DAMPERS

- Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719  
Method of damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c 18 N83-28064

## NUTS (FASTENERS)

- Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922  
Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489  
Fastener stretcher  
[NASA-CASE-GSC-11149-1] c 15 N73-30457  
High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c 37 N79-14383  
Floating nut retention system  
[NASA-CASE-MSC-16938-1] c 37 N80-23653

## O RING SEALS

- High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c 15 N70-36908  
Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442  
Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c 37 N81-26447  
Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091

- Resilient seal ring assembly with spring means applying force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497  
Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790

## OBLIQUE WINGS

- Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c 05 N76-29217

## OCCLUSION

- Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744

## OCEAN CURRENTS

- Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327

## OCEAN DATA ACQUISITIONS SYSTEMS

- Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667  
Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723

## OCEAN SURFACE

- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391  
Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667

## OCEAN THERMAL ENERGY CONVERSION

- Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c 44 N78-32542

## OFFSHORE PLATFORMS

- Ocean thermal plant  
[NASA-CASE-KSC-11034-1] c 44 N78-32542

## OHMMETERS

- Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c 15 N72-23497

## OIL EXPLORATION

- Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c 46 N79-23555  
Borehole geological assessment  
[NASA-CASE-NPO-14231-1] c 46 N80-10709

## OIL RECOVERY

- Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c 27 N77-31308  
In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452  
Crude oil desulfurization  
[NASA-CASE-NPO-14542-1] c 25 N82-23282  
Solar heated oil shale pyrolysis process  
[NASA-CASE-NPO-16392-1] c 25 N86-25428

## OILS

- Method of recording a gas flow pattern Patent  
[NASA-CASE-XMF-01779] c 12 N71-20815  
Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c 27 N77-31308

## OMNIDIRECTIONAL ANTENNAS

- Omnidirectional microwave spacecraft antenna Patent  
[NASA-CASE-XLA-03114] c 09 N71-22888  
Stacked array of omnidirectional antennas  
[NASA-CASE-LAR-10545-1] c 09 N72-21244  
Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c 09 N72-25247

## ONBOARD EQUIPMENT

- Survival couch Patent  
[NASA-CASE-XLA-00118] c 05 N70-33285  
Cryogenic storage system Patent  
[NASA-CASE-XMS-04390] c 31 N70-41871  
Fiber optic vibration transducer and analyzer Patent  
[NASA-CASE-XMF-02433] c 14 N71-10616  
Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c 31 N71-21064  
Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948  
A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c 07 N71-33613  
Collapsible Apollo couch  
[NASA-CASE-MSC-13140] c 05 N72-11085  
Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c 10 N72-20221  
Delayed simultaneous release mechanism  
[NASA-CASE-GSC-10814-1] c 03 N73-20039  
Electronic strain-level counter  
[NASA-CASE-LAR-10756-1] c 32 N73-26910  
Magnetic heading reference  
[NASA-CASE-LAR-11387-1] c 04 N76-20114

## OPEN CHANNEL FLOW

- Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180

## OPERATING TEMPERATURE

Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579

## OPERATIONAL AMPLIFIERS

Digital automatic gain amplifier  
[NASA-CASE-KSC-11008-1] c 33 N79-22373  
Automatic level control circuit  
[NASA-CASE-KSC-11170-1] c 33 N83-36356  
Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975  
Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624

## OPHTHALMOLOGY

Ophthalmic method and apparatus  
[NASA-CASE-LEW-11689-1] c 05 N73-27082  
Ophthalmic liquefaction pump  
[NASA-CASE-LEW-12051-1] c 52 N75-33640

## OPTICAL COMMUNICATION

Retrodirective optical system  
[NASA-CASE-XGS-04480] c 16 N69-27491  
Optical communications system Patent  
[NASA-CASE-XLA-01090] c 07 N71-12389  
Optical frequency waveguide and transmission system Patent  
[NASA-CASE-HQN-10541-4] c 16 N71-27183  
Optical communications system Patent  
[NASA-CASE-XLA-01090] c 16 N71-28963  
High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119  
Apparatus for simulating optical transmission links  
[NASA-CASE-GSC-11877-1] c 74 N78-18913  
Fiber distributed feedback laser  
[NASA-CASE-NPO-13531-1] c 36 N78-24553  
Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N78-30053  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942  
Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346  
Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c 74 N78-14889  
Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c 74 N83-29032  
Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N84-32620

## OPTICAL COUPLING

Automatic quadrature control and measuring system — using optical coupling circuitry  
[NASA-CASE-MFS-21860-1] c 35 N74-21017  
Optical fiber coupling method and apparatus  
[NASA-CASE-NPO-15464-1] c 74 N85-29749

## OPTICAL DATA PROCESSING

Optical data processing using paraboloidal mirror segments  
[NASA-CASE-GSC-11296-1] c 23 N73-30866  
Recorder/processor apparatus — for optical data processing  
[NASA-CASE-GSC-11553-1] c 35 N74-15831  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195  
Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342  
Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918  
Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348

## OPTICAL DENSITY

Medical diagnosis system and method with multispectral imaging — depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783  
Laser Schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N85-30932

## OPTICAL EMISSION SPECTROSCOPY

Maksutov spectrograph Patent  
[NASA-CASE-XLA-10402] c 14 N71-29041

## OPTICAL EQUIPMENT

Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355  
Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365  
Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23268  
Laser grating interferometer Patent  
[NASA-CASE-XLA-04295] c 16 N71-24170  
Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868

Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c 19 N71-26674  
Petzval type objective including field shaping lens Patent  
[NASA-CASE-GSC-10700] c 23 N71-30027  
Compact spectroradiometer  
[NASA-CASE-HQN-10683] c 14 N71-34389  
Fine adjustment mount  
[NASA-CASE-MFS-20249] c 15 N72-11388  
Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037  
Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414  
Boreoscope with variable angle scope  
[NASA-CASE-MFS-15182] c 14 N72-32452  
Cyclically operable optical shutter  
[NASA-CASE-NPO-10758] c 14 N73-14427  
Star tracking reticles and process for the production thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630  
Infrared horizon locator  
[NASA-CASE-LAR-10726-1] c 14 N73-20475  
Multiple pass reimaging optical system  
[NASA-CASE-ARC-10194-1] c 23 N73-20741  
Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089  
Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008  
Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304  
Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040  
Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c 35 N75-12273  
Optical alignment device  
[NASA-CASE-ARC-10932-1] c 74 N76-22993  
Visual examination apparatus  
[US-PATENT-RE-28,921] c 52 N78-30793  
Optical instrument employing reticle having preselected visual response pattern formed thereon  
[NASA-CASE-ARC-10976-1] c 74 N77-22950  
Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366  
Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932  
Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c 27 N77-32308  
Process for producing a well-adhered durable optical coating on an optical plastic substrate — abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854  
Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10893  
Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149  
Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978  
High speed multi focal plane optical system  
[NASA-CASE-GSC-12683-1] c 74 N83-36898  
High-temperature, high-pressure optical cell  
[NASA-CASE-MFS-26000-1] c 74 N84-16986  
Optical system  
[NASA-CASE-NPO-15801-1] c 74 N85-23396

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High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c 14 N71-15822  
Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence  
[NASA-CASE-GSC-11133-1] c 23 N72-11568  
Optical noise suppression device and method — laser light exposing film  
[NASA-CASE-MSC-12640-1] c 74 N76-31998  
System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c 74 N77-18893  
Optical conversion method — for spacecraft television  
[NASA-CASE-MSC-12618-1] c 74 N78-17865  
Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c 74 N79-14891  
Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 35 N84-25016  
Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766  
A method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N86-20128  
Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650

## OPTICAL GYROSCOPES

Optical gyroscope system  
[NASA-CASE-NPO-14258-1] c 35 N81-33448  
Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037  
Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N86-20129

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Multispectral imaging system  
[NASA-CASE-MSC-12404-1] c 23 N73-13861  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942  
Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346

## OPTICAL MEASUREMENT

Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMF-14032] c 20 N71-16340  
Ellipsoidal mirror reflectometer including means for averaging the radiation reflected from the sample Patent  
[NASA-CASE-XGS-05291] c 23 N71-16341  
Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040  
Hybrid holographic non-destructive test system  
[NASA-CASE-MFS-23114-1] c 38 N78-32447  
Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913  
Apparatus for fiber optic liquid level sensing  
[NASA-CASE-MSC-18674-1] c 74 N81-24907  
Film advance indicator  
[NASA-CASE-LAR-12474-1] c 35 N82-26628  
Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577  
Rotary target V-block  
[NASA-CASE-LAR-12007-3] c 35 N84-16523  
Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766  
Optical multiple sample vacuum integrating sphere  
[NASA-CASE-GSC-12849-1] c 74 N86-26190

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[NASA-CASE-XGS-04879] c 14 N71-20428  
Optical machine tool alignment indicator Patent  
[NASA-CASE-XAC-09489-1] c 15 N71-26673  
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[NASA-CASE-ERC-10248] c 14 N72-17323  
Optical probing of supersonic flows with statistical correlation  
[NASA-CASE-MFS-20642] c 14 N72-21407  
Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c 54 N75-27759  
Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c 74 N80-21138  
Visible and infrared polarization ratio spectrophotometer  
[NASA-CASE-LAR-12285-1] c 35 N80-28687  
Interferometer  
[NASA-CASE-NPO-14502-1] c 74 N81-17888  
Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c 74 N82-30071  
Optical fiber tactile sensor  
[NASA-CASE-NPO-15375-1] c 74 N84-11921  
Vibration-free Raman Doppler velocimeter  
[NASA-CASE-LAR-13268-1] c 35 N85-29216  
Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266

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Optical instruments  
[NASA-CASE-MSC-14096-1] c 74 N74-15095  
Large volume multiple-path nuclear pumped laser  
[NASA-CASE-LAR-12592-1] c 36 N82-13415

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[NASA-CASE-XLE-00503] c 14 N70-34818  
Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065  
Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414  
Light direction sensor  
[NASA-CASE-NPO-11201] c 14 N72-27409  
Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662  
Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008  
Optically actuated two position mechanical mover  
[NASA-CASE-NPO-13105-1] c 37 N74-21060

- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437
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Optical pump and driver system for lasers  
[NASA-CASE-ERC-10283] c 16 N72-25485  
Laser head for simultaneous optical pumping of several dye lasers --- with single flash lamp  
[NASA-CASE-LAR-11341-1] c 36 N75-19655  
Stabilization of He<sub>2</sub>(a 3 Sigma u+) molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826  
Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189  
Off-axis coherently pumped laser  
[NASA-CASE-GSC-12592-1] c 36 N84-28065
- OPTICAL PYROMETERS**  
Motion picture camera for optical pyrometry Patent  
[NASA-CASE-XLA-00062] c 14 N70-33254
- OPTICAL RADAR**  
Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437
- OPTICAL RANGE FINDERS**  
Altitude sensing device  
[NASA-CASE-XMS-01994-1] c 14 N72-17326  
Optical range finder having nonoverlapping complete images  
[NASA-CASE-MSC-12105-1] c 14 N72-21409
- OPTICAL REFLECTION**  
Hybrid holographic system using reflected and transmitted object beams simultaneously Patent  
[NASA-CASE-MFS-20074] c 16 N71-15565  
Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c 19 N71-26674  
Illumination system including a virtual light source Patent  
[NASA-CASE-HQN-10781] c 23 N71-30292  
Diffuse reflective coating  
[NASA-CASE-GSC-11214-1] c 06 N73-13128  
Gregorian all-reflective optical system  
[NASA-CASE-GSC-12058-1] c 74 N77-26942  
Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933  
Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c 73 N78-32848  
Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082
- OPTICAL RESONANCE**  
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[NASA-CASE-XGS-04879] c 14 N71-20428  
Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653
- OPTICAL SCANNERS**  
Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485  
Optical inspection apparatus Patent  
[NASA-CASE-XMF-00462] c 14 N70-34298  
Electro-optical scanning apparatus Patent Application  
[NASA-CASE-NPO-11106] c 14 N70-34697  
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[NASA-CASE-XGS-00809] c 21 N70-35427  
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[NASA-CASE-NPO-11002] c 14 N72-22441  
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[NASA-CASE-GSC-10890-1] c 21 N73-30640  
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[NASA-CASE-MSC-14096-1] c 74 N74-15095  
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[NASA-CASE-KSC-10782-1] c 33 N75-30431  
Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c 66 N76-19888  
Optical scanner --- laser doppler velocimeters  
[NASA-CASE-LAR-11711-1] c 74 N78-17866  
Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c 74 N78-27904  
Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c 35 N80-20563  
Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c 76 N80-32245  
Scanning afocal laser velocimeter projection lens system  
[NASA-CASE-LAR-12328-1] c 36 N82-32712  
Optical scanner  
[NASA-CASE-GSC-12897-1] c 74 N84-25450
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Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678

- Optical tracker having overlapping reticles on parallel axes Patent  
[NASA-CASE-XGS-05715] c 23 N71-16100
- Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627
- Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520
- Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768
- Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117
- Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348
- OPTICAL TRANSFER FUNCTION**  
Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c 74 N76-19935
- OPTICAL WAVEGUIDES**  
Fiber optic transmission line stabilization apparatus and method  
[NASA-CASE-NPO-15036-1] c 74 N82-19029
- OPTIMIZATION**  
Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c 14 N71-27407
- OPTOGALVANIC SPECTROSCOPY**  
Discharge cell for optogalvanic spectroscopy having orthogonal relationship between the probe laser and discharge axis  
[NASA-CASE-NPO-16271-1] c 35 N86-25753
- ORAL HYGIENE**  
Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c 52 N82-29862
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Tanker orbit transfer vehicle and method  
[NASA-CASE-MSC-20543-1] c 18 N84-22610  
Aerobraking orbital transfer vehicle  
[NASA-CASE-MSC-20921-1] c 18 N86-20471
- ORBITAL ASSEMBLY**  
Structural members, method and apparatus  
[NASA-CASE-MSC-16217-1] c 31 N81-27323  
Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895
- ORBITAL LAUNCHING**  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- ORBITAL MANEUVERING VEHICLES**  
Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N86-21147
- ORBITAL MANEUVERS**  
Passive propellant system  
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- ORBITAL MECHANICS**  
A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth  
[NASA-CASE-MSC-12391] c 30 N73-12884
- ORBITAL SERVICING**  
Electrical self-aligning connector --- orbital servicer vehicles  
[NASA-CASE-MFS-25211-2] c 33 N84-14423  
Tanker orbit transfer vehicle and method  
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[NASA-CASE-XMS-01906] c 31 N70-41373  
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[NASA-CASE-XMF-05344] c 31 N71-16345  
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[NASA-CASE-MFS-20410] c 15 N71-19214  
Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729
- ORGANIC CHEMISTRY**  
Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4, 5-tetraamino-benzene Patent  
[NASA-CASE-XLA-03104] c 06 N71-11235  
Amino acid analysis  
[NASA-CASE-NPO-12130-1] c 25 N75-14844
- ORGANIC COMPOUNDS**  
Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230  
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[NASA-CASE-XNP-03250] c 06 N71-23500  
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[NASA-CASE-NPO-10701] c 06 N71-28620  
Diffuse reflective coating  
[NASA-CASE-GSC-11214-1] c 06 N73-13128  
Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245  
Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MSC-14428-1] c 23 N77-17161

- Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MSC-16497-1] c 25 N82-12166
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746
- The 1-(diorganooxophosphonyl)methyl-2, 4- and -2, 6-dinitro and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N86-20499
- Amine terminated bisaspartamide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726
- ORGANIC MATERIALS**  
Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N86-24840
- ORGANIC PHOSPHORUS COMPOUNDS**  
Fire resistant polymers based on 1-((dialkoxyposphoryl)methyl)-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11512-1] c 27 N84-20702
- ORGANIC SILICON COMPOUNDS**  
Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052
- ORGANIC SULFUR COMPOUNDS**  
Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246
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Ammonium perchlorate composite propellant containing an organic transitional metal chelate catalytic additive Patent  
[NASA-CASE-LAR-10173-1] c 27 N71-14090  
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[NASA-CASE-XNP-04023] c 06 N71-28808  
Carboranyl-methylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750  
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[NASA-CASE-NPO-16423-1-CU] c 37 N86-19610
- ORGANOMETALLIC POLYMERS**  
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[NASA-CASE-HQN-10364] c 06 N71-27363  
Thiophenyl ether disiloxanes and trisiloxanes useful as lubricant fluids  
[NASA-CASE-MFS-22411-1] c 37 N74-21058
- ORIFICE FLOW**  
Relief valve  
[NASA-CASE-XMS-05894-1] c 15 N69-21924
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Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736  
Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N86-24935
- ORTHO HYDROGEN**  
Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324
- ORTHO PARA CONVERSION**  
Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324
- ORTHOGONAL MULTIPLEXING THEORY**  
Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917
- ORTHOGONALITY**  
Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790  
Geometries for roughness shapes in laminar flow  
[NASA-CASE-LAR-13255-1] c 02 N84-12092
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Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c 54 N76-22914  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661
- ORTHOTROPIC CYLINDERS**  
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[NASA-CASE-XLE-00409] c 28 N71-15658  
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Viscous-pendulum-damper Patent  
[NASA-CASE-XLA-02079] c 12 N71-16894  
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[NASA-CASE-XAC-01591] c 31 N71-17729  
Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146  
Wind tunnel model damper Patent  
[NASA-CASE-XLA-09480] c 11 N71-33612  
Apparatus for damping operator induced oscillations of a controlled system --- flight control  
[NASA-CASE-FRC-11041-1] c 33 N82-18493  
Method of damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c 18 N83-28064  
Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333

## OSCILLATIONS

Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c 10 N73-26228

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Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461

Frequency control network for a current feedback oscillator Patent  
[NASA-CASE-GSC-10041-1] c 10 N71-19418

Static inverter Patent  
[NASA-CASE-XGS-05289] c 09 N71-19470

Signal ratio system utilizing voltage controlled oscillators Patent  
[NASA-CASE-XMF-04367] c 09 N71-23545

Pneumatic oscillator Patent  
[NASA-CASE-LEW-10345-1] c 10 N71-25899

Wideband VCO with high phase stability Patent  
[NASA-CASE-XLA-03893] c 10 N71-27271

Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810

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[NASA-CASE-NPO-10760] c 09 N72-25254

Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c 33 N74-10194

Ultra-stable oscillator with complementary transistors  
[NASA-CASE-GSC-11513-1] c 33 N74-20862

LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers  
[NASA-CASE-MFS-21698-1] c 33 N74-26732

Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c 33 N77-17351

Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c 71 N77-26919

Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349

Laser Resonator  
[NASA-CASE-GSC-12585-1] c 36 N84-14509

Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c 33 N84-16452

Dielectric based submillimeter backward wave oscillator circuit  
[NASA-CASE-LEW-13736-1] c 33 N84-27974

Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N85-30201

JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515

Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N86-20679

A water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N86-20755

Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624

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Waveform simulator Patent  
[NASA-CASE-NPO-10251] c 10 N71-27365

Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT  
[NASA-CASE-LAR-10320-1] c 09 N72-23172

Exposure interlock for oscilloscope cameras  
[NASA-CASE-LAR-10319-1] c 14 N73-32322

X-Y alphanumeric character generator for oscilloscopes  
[NASA-CASE-GSC-11582-1] c 33 N75-19517

## OUTER PLANETS EXPLORERS

Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613

## OUTGASSING

Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365

Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-LEW-10278-1] c 15 N71-28582

Low outgassing polydimethylsiloxane material and preparation thereof  
[NASA-CASE-GSC-11358-1] c 06 N73-26100

## OUTLET FLOW

Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639

Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178

## OUTPUT

Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c 33 N76-14373

Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N86-20679

## OVENS

Heat shield oven  
[NASA-CASE-XMS-04318] c 15 N69-27871

Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c 35 N81-26431

## OVERPRESSURE

Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588

## OVERVOLTAGE

Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897

Power responsive overload sensing circuit Patent  
[NASA-CASE-GSC-10687-1] c 10 N71-33129

Overvoltage protection network  
[NASA-CASE-ARC-10187-1] c 33 N74-17929

Overload protection system for power inverter  
[NASA-CASE-NPO-13872-1] c 33 N78-10377

## OXAZOLE

Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300

The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262

Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11287-2] c 23 N82-28353

## OXIDATION

Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040

Automated analysis of oxidative metabolites  
[NASA-CASE-ARC-10469-1] c 25 N75-12086

Hydrogen rich gas generator  
[NASA-CASE-NPO-13484-2] c 44 N76-29704

Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MSC-14931-1] c 25 N78-10225

Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c 27 N80-10358

Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555

Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458

Oxidation protecting coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N86-26434

## OXIDATION RESISTANCE

Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent  
[NASA-CASE-XLE-02082] c 17 N71-16028

Method of protecting the surface of a substrate --- by applying aluminide coating  
[NASA-CASE-LEW-11696-1] c 37 N75-13261

Duplex aluminized coatings  
[NASA-CASE-LEW-11696-2] c 26 N75-19408

High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c 27 N77-13217

High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213

Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11830-4] c 24 N79-17916

Improved thermal barrier coating system  
[NASA-CASE-LEW-13324-1] c 26 N82-26431

Nickel ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505

Improved nickel base coating alloy --- oxidation resistant coatings  
[NASA-CASE-LEW-13834-1] c 26 N83-24839

Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233

High temperature resistant polyimide from tetra ester, diamine, diester and N-arynadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457

Diffusion oxygen barrier coating A02/MF A01  
[NASA-CASE-LAR-13474-1-SB] c 26 N86-24814

Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569

## OXIDATION-REDUCTION REACTIONS

Electrochemical cell for rebalancing REDOX flow system  
[NASA-CASE-LEW-13150-1] c 44 N79-26474

Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487

Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268

## OXIDE FILMS

Method of forming oxide coatings --- for solar collector heating panels  
[NASA-CASE-LEW-13132-1] c 27 N83-29388

Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233

Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458

Oxidation protecting coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N86-26434

Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569

## OXIDES

Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029

## OXIDIZERS

Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052

Injection head for delivering liquid fuel and oxidizers  
[NASA-CASE-NPO-10046] c 28 N72-17843

Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MSC-20622-1] c 25 N86-19413

## OXIMETRY

Method and apparatus for continuously monitoring blood oxygenation, blood pressure, pulse rate and the pressure pulse curve utilizing an ear oximeter as transducer Patent  
[NASA-CASE-XAC-05422] c 04 N71-23185

## OXYGEN

Analytical test apparatus and method for determining oxide content of alkali metal Patent  
[NASA-CASE-XLE-01997] c 06 N71-23527

Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773

Method of detecting oxygen in a gas  
[NASA-CASE-LAR-10668-1] c 06 N73-16106

Method for obtaining oxygen from lunar or similar soil  
[NASA-CASE-MSC-12408-1] c 46 N74-13011

Nonflammable coating compositions --- for use in high oxygen environments  
[NASA-CASE-MFS-20486-2] c 27 N74-17283

A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447

Technique for measuring gas conversion factors  
[NASA-CASE-LAR-13220-1] c 34 N86-12547

Oxygen recombination in individual pressure vessel nickel-hydrogen batteries  
[NASA-CASE-LEW-13822-1] c 44 N86-25874

## OXYGEN ATOMS

Variable energy, high flux, ground-state atomic oxygen source  
[NASA-CASE-NPO-16640-1-CU] c 72 N86-27055

## OXYGEN CONSUMPTION

Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c 05 N71-11202

## OXYGEN FLUORIDES

Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N78-16228

## OXYGEN ISOTOPES

Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-1SB] c 25 N86-32540

## OXYGEN METABOLISM

Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-MFS-21415-1] c 52 N74-20728

## OXYGEN PLASMA

Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052

## OXYGEN PRODUCTION

Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N86-23744

## OXYGEN RECOMBINATION

Isotope exchange in oxide-containing catalyst  
[NASA-CASE-LAR-13542-1SB] c 25 N86-32540

Pretreatment and reactivation of an oxide-containing catalyst  
[NASA-CASE-LAR-13540-1SB] c 25 N86-32541

## OXYGEN REGULATORS

Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N78-27664

## OXYGEN SUPPLY EQUIPMENT

Self-contained breathing apparatus  
[NASA-CASE-MSC-14733-1] c 54 N76-24900

Slow opening valve --- valve design for shuttle portable oxygen system  
[NASA-CASE-MSC-20112-1] c 37 N85-20338

## OZONE

Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c 25 N78-15210

Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579

Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514



## P

## P-I-N JUNCTIONS

High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177

## P-N JUNCTIONS

Thin window, drifted silicon, charged particle detector  
[NASA-CASE-XLE-10529] c 14 N69-23191  
Semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980] c 09 N69-27422  
Radiation resistant silicon semiconductor devices

Patent  
[NASA-CASE-XGS-07801] c 09 N71-12513  
Biomedical radiation detecting probe Patent

[NASA-CASE-XMS-01177] c 05 N71-19440  
Method of making electrical contact on silicon solar cell

and resultant product Patent  
[NASA-CASE-XLE-04787] c 03 N71-20492

Method of changing the conductivity of vapor deposited gallium arsenide by the introduction of water into the vapor

deposition atmosphere Patent  
[NASA-CASE-XNP-01961] c 26 N71-29156  
Method of making semiconductor p-n junction stress

and strain sensor  
[NASA-CASE-XLA-04980-2] c 14 N72-28438  
Semiconductor surface protection material

[NASA-CASE-ERC-10339-1] c 18 N73-30532  
Method and apparatus for measuring minority carrier

lifetimes and bulk diffusion length in P-N junction solar cells  
[NASA-CASE-NPO-14100-1] c 44 N79-12541

Back wall solar cell  
[NASA-CASE-LEW-12236-2] c 44 N79-14528

**P-TYPE SEMICONDUCTORS**  
Semiconductor material and method of making same

Patent  
[NASA-CASE-XLE-02798] c 26 N71-23654  
Integrated P-channel MOS gyrator

[NASA-CASE-MFS-22343-1] c 33 N74-34638  
Method of fabricating Schottky Barrier solar cell

[NASA-CASE-NPO-13689-4] c 44 N82-28780

**PACKAGES**  
Impact testing machine Patent

[NASA-CASE-XNP-04817] c 14 N71-23225  
One hand backpack harness

[NASA-CASE-LAR-10102-1] c 05 N72-23085

**PACKAGING**  
Folding apparatus Patent

[NASA-CASE-XLA-00137] c 15 N70-33180  
Reflector space satellite Patent

[NASA-CASE-XLA-00138] c 31 N70-37981  
Apparatus and method for skin packaging articles

[NASA-CASE-MFS-20855] c 15 N73-27405  
Double-sided solar cell package

[NASA-CASE-NPO-14199-1] c 44 N79-25482

**PACKET TRANSMISSION**  
Multicomputer communication system

[NASA-CASE-NPO-15433-1] c 32 N85-21428

**PACKING DENSITY**  
Micropacked column for a chromatographic system

[NASA-CASE-XNP-04816] c 06 N69-39936

**PACKINGS (SEALS)**  
Fluid seal for rotating shafts

[NASA-CASE-LEW-11676-1] c 37 N76-22541

**PAD**  
Lubricated journal bearing

[NASA-CASE-LEW-11076-3] c 37 N75-30562

**PAINTS**  
Intumescent paints Patent

[NASA-CASE-ARC-10099-1] c 18 N71-15469  
Alkali metal silicate protective coating Patent

[NASA-CASE-XGS-04799] c 18 N71-24183  
Inorganic thermal control pigment Patent

[NASA-CASE-XNP-02139] c 18 N71-24184  
Diffusely reflecting paints including

polytetrafluoroethylene and method of manufacture  
[NASA-CASE-GSC-12883-1] c 27 N85-29044

**PALLADIUM**  
Electrically conductive palladium containing polyimide

films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396

**PALLADIUM COMPOUNDS**  
Prevention of pressure build-up in electrochemical cells

Patent  
[NASA-CASE-XGS-01419] c 03 N70-41864  
Process for separation of dissolved hydrogen from water

by use of palladium and process for coating palladium with palladium black

[NASA-CASE-MSC-13335-1] c 06 N72-31140

**PANELS**  
All-directional fastener Patent

[NASA-CASE-XLA-01807] c 15 N71-10799  
Panelized high performance multilayer insulation

Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351

Solar panel fabrication Patent  
[NASA-CASE-XNP-03413] c 03 N71-26726

Method of making pressurized panel Patent  
[NASA-CASE-XLA-08916] c 15 N71-29018

Honeycomb panels formed of minimal surface periodic tubule layers

[NASA-CASE-ERC-10364] c 18 N72-25540  
Pressurized panel

[NASA-CASE-XLA-08916-2] c 14 N73-28487  
Ultrasonic scanner for radial and flat panels

[NASA-CASE-MFS-20335-1] c 35 N74-10415  
Folding structure fabricated of rigid panels

[NASA-CASE-XHQ-02146] c 18 N75-27040  
Method of making a composite sandwich lattice

structure  
[NASA-CASE-LAR-11898-2] c 24 N78-17149

Selective coating for solar panels --- using black chrome and black nickel

[NASA-CASE-LEW-12159-1] c 44 N78-19599  
Hexagon solar power panel

[NASA-CASE-NPO-12148-1] c 44 N78-27515  
Aluminum or copper substrate panel for selective

absorption of solar energy  
[NASA-CASE-MFS-23518-3] c 44 N80-16452

Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999

Method of forming oxide coatings --- for solar collector heating panels

[NASA-CASE-LEW-13132-1] c 27 N83-29388  
Combustor liner construction

[NASA-CASE-LEW-14035-1] c 07 N84-24577  
Saltless solar pond

[NASA-CASE-NPO-15808-1] c 44 N84-34792

**PAPER (MATERIAL)**  
Process for purification of waste water produced by a

Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747

**PAPERS**  
Guide for a typewriter

[NASA-CASE-MFS-15218-1] c 37 N77-19457

**PARA HYDROGEN**  
Cooling by conversion of para to ortho-hydrogen

[NASA-CASE-GSC-12770-1] c 25 N83-29324

**PARABOLIC ANTENNAS**  
Antenna beam-shaping apparatus Patent

[NASA-CASE-XNP-00611] c 09 N70-35219  
Reversible motion drive system Patent

[NASA-CASE-NPO-10173] c 15 N71-24696  
Switchable beamwidth monopulse method and system

[NASA-CASE-GSC-11924-1] c 33 N76-27472  
Telescoping columns --- parabolic antenna support

[NASA-CASE-LAR-12195-1] c 31 N81-27324  
Focal axis resolver for offset reflector antennas

[NASA-CASE-GSC-12630-1] c 33 N83-36355

**PARABOLIC REFLECTORS**  
Parabolic reflector horn feed with spillover correction

Patent  
[NASA-CASE-XNP-00540] c 09 N70-35382

Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c 03 N70-41580

Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c 09 N71-20658

Plural beam antenna  
[NASA-CASE-GSC-11013-1] c 09 N73-19234

Composite antenna feed  
[NASA-CASE-GSC-11046-1] c 07 N73-28013

Single frequency, two feed dish antenna having switchable beamwidth

[NASA-CASE-GSC-11968-1] c 32 N76-15329  
Sun tracking solar energy collector

[NASA-CASE-NPO-13921-1] c 44 N79-14526  
Horizontally mounted solar collector

[NASA-CASE-MFS-23349-1] c 44 N79-23481  
Solar concentrator

[NASA-CASE-MFS-23727-1] c 44 N80-14473  
Apparatus for and method of compensating dynamic

unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082

**PARABOLOID MIRRORS**  
Optical data processing using paraboloidal mirror

segments  
[NASA-CASE-GSC-11296-1] c 23 N73-30666

Three mirror glancing incidence system for X-ray telescope  
[NASA-CASE-MFS-21372-1] c 74 N74-27866

**PARACHUTE DESCENT**  
Parachute glider Patent

[NASA-CASE-XLA-00898] c 02 N70-36804  
Vehicle parachute and equipment jettison system

Patent  
[NASA-CASE-XLA-00195] c 02 N70-38009

Line cutter Patent  
[NASA-CASE-XMS-04072] c 15 N70-42017

Vortex breech high pressure gas generator  
[NASA-CASE-LAR-10549-1] c 31 N73-13898

## PARACHUTE FABRICS

Lightweight, variable solidity knitted parachute fabric --- for aerodynamic decelerators

[NASA-CASE-LAR-10776-1] c 02 N74-10034  
Method for refurbishing and processing parachutes

[NASA-CASE-KSC-11042-1] c 09 N82-29330

**PARACHUTES**  
System for stabilizing torque between a balloon and gondola

[NASA-CASE-GSC-11077-1] c 02 N73-13008  
Deploy/release system --- model aircraft flight control

[NASA-CASE-LAR-11575-1] c 02 N76-16014  
System and method for refurbishing and processing

parachutes --- monorial conveyor system  
[NASA-CASE-KSC-11042-2] c 02 N81-26073

Method for refurbishing and processing parachutes  
[NASA-CASE-KSC-11042-1] c 09 N82-29330

Dual towline spin-recovery device  
[NASA-CASE-LAR-13076-1] c 08 N85-35200

**PARAGLIDERS**  
Parachute glider Patent

[NASA-CASE-XLA-00898] c 02 N70-36804

**PARALLAX**  
Projection system for display of parallax and perspective

[NASA-CASE-MFS-23194-1] c 35 N78-17357  
Ranging system which compares an object reflected

component of a light beam to a reference component of the light beam

[NASA-CASE-NPO-15865-1] c 74 N85-34629

**PARALLEL PLATES**  
Parallel plate viscometer Patent

[NASA-CASE-NPO-09462] c 14 N71-17584  
Dynamic capacitor having a peripherally driven element

and system incorporating the same  
[NASA-CASE-XNP-02899-1] c 33 N79-21265

Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c 37 N81-22360

**PARALLEL PROCESSING (COMPUTERS)**  
Digital data reformatter/deserializer

[NASA-CASE-NPO-13676-1] c 60 N79-20751  
Massively parallel processor computer

[NASA-CASE-GSC-12223-1] c 60 N83-25378  
Memory-based parallel data output controller

[NASA-CASE-GSC-12447-2] c 60 N84-28491

**PARAMETRIC AMPLIFIERS**  
Parametric amplifiers with idler circuit feedback

[NASA-CASE-LAR-10253-1] c 09 N72-25258  
Millimeter wave pumped parametric amplifier

[NASA-CASE-GSC-11617-1] c 33 N74-32660

**PARAMETRIC FREQUENCY CONVERTERS**  
Method and apparatus for quadruphase-shift-key and

linear phase modulation  
[NASA-CASE-NPO-14444-1] c 33 N81-15192

**PARAWINGS**  
Wing deployment method and apparatus Patent

[NASA-CASE-XMS-00907] c 02 N70-41630

**PARKING**  
Automated multi-level vehicle parking system

[NASA-CASE-NPO-13058-1] c 37 N77-22480

**PARTIAL PRESSURE**  
Vapor pressure measuring system and method Patent

[NASA-CASE-XMS-01618] c 14 N71-20741

**PARTICLE ACCELERATION**  
Molecular beam velocity selector Patent

[NASA-CASE-XLE-01533] c 11 N71-10777  
Dust particle injector for hypervelocity accelerators

Patent  
[NASA-CASE-XGS-06628] c 24 N71-16213

**PARTICLE ACCELERATOR TARGETS**  
Dispensing targets for ion beam particle generators

[NASA-CASE-NPO-13112-1] c 73 N74-26767  
Deuterium pass through target --- neutron emitting

target  
[NASA-CASE-LEW-11866-1] c 72 N76-15860

Closed loop spray cooling apparatus --- for particle accelerator targets

[NASA-CASE-LEW-11981-1] c 31 N78-17237

**PARTICLE BEAMS**  
Particle beam measurement apparatus using beam

kinetic energy to change the heat sensitive resistance of the detection probe Patent

[NASA-CASE-XLE-00243] c 14 N70-38602  
Doppler shift system --- system for measuring velocities

of radiating particles  
[NASA-CASE-HQN-10740-1] c 72 N74-19310

Apparatus for measuring charged particle beam  
[NASA-CASE-MFS-25641-1] c 72 N84-28575

**PARTICLE COLLISIONS**  
Particle detection apparatus including a ballistic

pendulum Patent  
[NASA-CASE-XMS-04201] c 14 N71-22990

**PARTICLE DENSITY (CONCENTRATION)**  
Micrometeoroid velocity measuring device Patent

[NASA-CASE-XLA-00495] c 14 N70-41332



**PARTICLE EMISSION**

- Extended area semiconductor radiation detectors and a novel readout arrangement Patent  
[NASA-CASE-XGS-03230] c 14 N71-23401
- Coincidence apparatus for detecting particles  
[NASA-CASE-XLA-07813] c 14 N72-17328

**PARTICLE ENERGY**

- Particle detection apparatus Patent  
[NASA-CASE-XLA-00135] c 14 N70-33322
- Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509

**PARTICLE MASS**

- Cosmic dust analyzer  
[NASA-CASE-MS-13802-2] c 35 N76-15431
- Microbalance --- for measuring particle mass  
[NASA-CASE-MS-11242] c 35 N78-17358

**PARTICLE MOTION**

- Moving particle composition analyzer  
[NASA-CASE-GSC-11889-1] c 35 N76-16393

**PARTICLE PRODUCTION**

- Production of I-123  
[NASA-CASE-LEW-11390-3] c 25 N76-29379

**PARTICLE SIZE DISTRIBUTION**

- Micropacked column for a chromatographic system  
[NASA-CASE-XNP-04816] c 06 N69-39836
- Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c 15 N70-33382
- Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride Patent  
[NASA-CASE-XLE-03940] c 18 N71-26153
- Grain refinement control in TIG arc welding  
[NASA-CASE-MS-19095-1] c 37 N75-19683
- Apparatus for handling micron size range particulate material  
[NASA-CASE-NPO-10151] c 37 N78-17386
- Frequency-scanning particle size spectrometer  
[NASA-CASE-NPO-13606-2] c 35 N80-18364
- Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242
- Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c 44 N81-27615
- Powder fed sheared dispersal particle generator  
[NASA-CASE-LAR-12785-1] c 37 N84-16561

**PARTICLE TRAJECTORIES**

- Micrometeoroid velocity and trajectory analyzer  
[NASA-CASE-GSC-11892-1] c 35 N76-15433
- Direction sensitive laser velocimeter --- determining the direction of particles using a helium-neon laser  
[NASA-CASE-LAR-12177-1] c 36 N81-24422

**PARTICLES**

- Soil particles separator, collector and viewer Patent  
[NASA-CASE-XNP-09770] c 15 N71-20440
- Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c 17 N72-28535
- Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLE-06094] c 33 N78-17293
- Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152
- Acoustic particle separation  
[NASA-CASE-NPO-15559-1] c 71 N85-30765
- Solar heated oil shale pyrolysis process  
[NASA-CASE-NPO-16392-1] c 25 N86-25428

**PARTICULATE SAMPLING**

- Apparatus for sampling particulates in gases  
[NASA-CASE-HQN-10037-1] c 14 N73-27376
- Electrophoretic sample insertion --- device for uniformly distributing samples in flow path  
[NASA-CASE-MFS-21395-1] c 25 N74-26948
- Sampler of gas borne particles  
[NASA-CASE-NPO-13396-1] c 35 N76-18401
- Fine particulate capture device  
[NASA-CASE-LEW-11583-1] c 35 N79-17192
- Biocontamination and particulate detection system  
[NASA-CASE-NPO-13953-1] c 35 N79-28527
- Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184

**PARTICULATES**

- Apparatus for sampling particulates in gases  
[NASA-CASE-HQN-10037-1] c 14 N73-27376

**PASSAGEWAYS**

- Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936

**PASSENGERS**

- Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445

**PASSIVE SATELLITES**

- Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309

- Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent  
[NASA-CASE-XGS-02608] c 07 N70-41678
- Method of making an inflatable panel Patent  
[NASA-CASE-XLA-03497] c 15 N71-23052

**PATENTS**

- Constant magnification optical tracking system  
[NASA-CASE-NPO-14813-1] c 74 N82-24072
- Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c 44 N83-10494
- High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191

**PATIENTS**

- Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159

**PATTERN RECOGNITION**

- Surface roughness detector Patent  
[NASA-CASE-XLA-00203] c 14 N70-34161
- Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c 71 N74-21014
- Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1CU] c 60 N86-23283

**PAYLOAD DELIVERY (STs)**

- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469

**PAYLOAD RETRIEVAL (STs)**

- Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c 74 N79-13855
- Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303

**PAYLOADS**

- Foam generator Patent  
[NASA-CASE-XLA-00838] c 03 N70-36778
- Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582
- Payload/burned-out motor case separation system Patent  
[NASA-CASE-XLA-05369] c 31 N71-15687
- Velocity package Patent  
[NASA-CASE-XLA-01339] c 31 N71-15692
- Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085
- Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c 14 N71-23227
- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609

**PCM TELEMETRY**

- Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964
- Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255
- High speed direct binary-to-binary coded decimal converter  
[NASA-CASE-KSC-10326] c 08 N72-21197

**PEELING**

- Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419

**PEENING**

- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N84-20670
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550

**PELLETS**

- Support structure for irradiated elements Patent  
[NASA-CASE-XNP-06031] c 15 N71-15606
- Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940

**PELTIER EFFECTS**

- Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146
- Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19604

**PELVIS**

- Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507

**PENETRANTS**

- Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170

**PENETRATION**

- Method and device for detection of surface discontinuities or defects  
[NASA-CASE-MS-14187-1] c 35 N74-32879
- Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137

**PENETROMETERS**

- Lunar penetrometer Patent  
[NASA-CASE-XLA-00934] c 14 N71-22765
- Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420
- Soil penetrometer  
[NASA-CASE-XNP-05530] c 14 N73-32321
- Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367
- Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443

**PERCEPTION**

- Method for measuring cutaneous sensory perception  
[NASA-CASE-MS-13609-1] c 05 N72-25122

**PERFLUORO COMPOUNDS**

- Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254
- Perfluoro polyether acyl fluorides  
[NASA-CASE-NPO-10765] c 06 N72-20121
- Reaction of fluorine with polyperfluoropolylenes  
[NASA-CASE-NPO-10862] c 06 N72-22107
- Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c 06 N72-25151
- Polymers of perfluorobutadiene and method of manufacture  
[NASA-CASE-NPO-10863-2] c 06 N72-25152
- Polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c 06 N72-27144
- Polymerizable disilanes having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979-2] c 06 N73-32030
- Perfluoro alkylene dioxy-bis-(4-phthalic anhydrides and oxy-bis-(perfluoroalkyleneoxyphthalic anhydrides  
[NASA-CASE-MFS-22356-1] c 23 N75-30256
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523
- Fluoroether modified epoxy composites  
[NASA-CASE-ARC-11418-1] c 24 N84-11213
- Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744
- Perfluoro (imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582

**PERFLUOROALKANE**

- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300

**PERFORATED PLATES**

- Process for glass coating an ion accelerator grid Patent  
[NASA-CASE-LEW-10278-1] c 15 N71-28582

**PERFORATED SHELLS**

- Method of fabricating an article with cavities --- with thin bottom walls  
[NASA-CASE-LAR-10318-1] c 31 N74-18089

**PERFORMANCE PREDICTION**

- Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175

**PERFORMANCE TESTS**

- Frangible electrochemical cell  
[NASA-CASE-XGS-10010] c 03 N72-15986
- Solar cell assembly test method  
[NASA-CASE-NPO-10401] c 03 N72-20033
- Linear explosive comparison  
[NASA-CASE-LAR-10800-1] c 33 N72-27959
- Split-cross-bridge resistor for testing for proper fabrication of integrated circuits  
[NASA-CASE-NPO-16021-1] c 33 N85-30187

**PERIODIC VARIATIONS**

- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401

**PERIPHERAL EQUIPMENT (COMPUTERS)**

- Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MS-20258-1] c 60 N84-28492

**PERMEABILITY**

- Ionene membrane separator  
[NASA-CASE-NPO-11091] c 18 N72-22567
- System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c 39 N80-10507
- Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687
- Geological assessment probe  
[NASA-CASE-NPO-14558-1] c 46 N80-24906

## PEROXIDES

Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252

## PERSPIRATION

Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120  
Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c 52 N81-29763

## PERTURBATION

Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597

## PERTURBATION THEORY

Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c 35 N75-16783

## PH FACTOR

Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923

## PHASE COHERENCE

Signal phase estimator  
[NASA-CASE-NPO-11203] c 10 N72-20224  
Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523

## PHASE CONTRAST

Laser pulse detection method and apparatus  
[NASA-CASE-NPO-16030-1] c 36 N84-25037

## PHASE CONTROL

Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577  
Wideband VCO with high phase stability Patent  
[NASA-CASE-XLA-03893] c 10 N71-27271  
Induction motor control system with voltage controlled oscillator circuit  
[NASA-CASE-MFS-21465-1] c 10 N73-32145  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519  
Digital numerically controlled oscillator  
[NASA-CASE-MSC-16747-1] c 33 N81-17349  
Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345  
System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516  
Method and apparatus for self-calibration and phasing of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493

## PHASE DEMODULATORS

Phase demodulation system with two phase locked loops Patent  
[NASA-CASE-XNP-00777] c 10 N71-19469  
Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c 33 N77-14334

## PHASE DETECTORS

Phase detector assembly Patent  
[NASA-CASE-XMF-00701] c 09 N70-40272  
Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392  
High speed phase detector Patent  
[NASA-CASE-XNP-01306-2] c 09 N71-24596  
Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c 33 N74-14956  
Low distortion automatic phase control circuit --- voltage controlled phase shifter  
[NASA-CASE-MFS-21671-1] c 33 N74-22885  
Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c 33 N75-26243  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331  
Frequency discriminator and phase detector circuit  
[NASA-CASE-NPO-11515-1] c 33 N77-13315  
Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c 33 N77-30365  
Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313  
High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454  
Three phase power factor controller  
[NASA-CASE-MFS-25535-2] c 33 N84-22885  
Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952  
Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975  
Double reference pulsed phase locked loop (DRP-2L-2)  
[NASA-CASE-LAR-13310-1] c 32 N85-21441

Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143

## PHASE DEVIATION

System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927

## PHASE LOCK DEMODULATORS

Compensating bandwidth switching transients in an amplifier circuit Patent  
[NASA-CASE-XNP-01107] c 10 N71-28859

## PHASE LOCKED SYSTEMS

Automatic acquisition system for phase-locked loop  
[NASA-CASE-XGS-04994] c 09 N89-21543  
Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680  
Automatic frequency discriminators and control for a phase-locked loop providing frequency preset capabilities Patent  
[NASA-CASE-XMF-08665] c 10 N71-19467  
Burst synchronization detection system Patent  
[NASA-CASE-XMS-05605-1] c 10 N71-19468  
Phase demodulation system with two phase locked loops Patent  
[NASA-CASE-XNP-00777] c 10 N71-19469  
Diversity receiving system with diversity phase lock Patent  
[NASA-CASE-XGS-01222] c 10 N71-20841  
Phase locked phase modulator including a voltage controlled oscillator Patent  
[NASA-CASE-XNP-05382] c 10 N71-23544  
Video sync processor Patent  
[NASA-CASE-KSC-10002] c 10 N71-25865  
Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c 07 N72-20140  
Data-aided carrier tracking loops  
[NASA-CASE-NPO-11282] c 10 N73-16205  
Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171  
Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012  
Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113  
Digital second-order phase-locked loop  
[NASA-CASE-NPO-11905-1] c 33 N74-12887  
Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c 33 N75-13139  
Low speed phaselock speed control system --- for brushless dc motor  
[NASA-CASE-GSC-11127-1] c 09 N75-24758  
Digital phase-locked loop  
[NASA-CASE-GSC-11623-1] c 33 N75-25040  
Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c 17 N76-22245  
Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c 33 N77-14334  
Frequency translating phase conjugation circuit for active retrodirective antenna array --- microwave transmission  
[NASA-CASE-NPO-14536-1] c 32 N81-14185  
PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c 33 N81-33405  
Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539  
Pulsed phase locked loop strain monitor --- voltage controlled oscillators  
[NASA-CASE-LAR-12772-1] c 33 N83-16626  
Apparatus and method for tracking the fundamental frequency of an analog input signal  
[NASA-CASE-ARC-11367-1] c 33 N83-21238  
Processing circuit with asymmetry corrector and convolutional encoder for digital data  
[NASA-CASE-MSC-20187-1] c 33 N85-20249  
Double reference pulsed phase locked loop (DRP-2L-2)  
[NASA-CASE-LAR-13310-1] c 32 N85-21441  
Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N86-20780

## PHASE MODULATION

Phase quadrature-plural channel data transmission system Patent  
[NASA-CASE-XAC-06302] c 08 N71-19763  
Adaptive tracking notch filter system Patent  
[NASA-CASE-XMF-01892] c 10 N71-22986  
Phase locked phase modulator including a voltage controlled oscillator Patent  
[NASA-CASE-XNP-05382] c 10 N71-23544  
Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142  
Phase modulator Patent  
[NASA-CASE-MSC-13201-1] c 07 N71-28429

Two carrier communication system with single transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118  
Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c 32 N74-20811  
Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981  
Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAR-11607-1] c 32 N77-14292  
Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c 33 N78-25319  
Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c 33 N78-32338  
Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c 20 N79-20179  
Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308  
Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c 32 N84-22820  
Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952  
Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590

## PHASE SHIFT

Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392  
Electromagnetic polarization systems and methods Patent  
[NASA-CASE-GSC-10021-1] c 09 N71-24595  
Method and apparatus for frequency-division multiplex communications by digital phase shift of carrier  
[NASA-CASE-NPO-11338] c 08 N72-25208  
Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432  
Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-183371-1] c 33 N85-20251  
Double reference pulsed phase locked loop (DRP-2L-2)  
[NASA-CASE-LAR-13310-1] c 32 N85-21441  
JFET reflection oscillator  
[NASA-CASE-GSC-12555-1] c 33 N86-19515

## PHASE SHIFT CIRCUITS

Gyrator type circuit Patent  
[NASA-CASE-XAC-10608-1] c 09 N71-12517  
Phase shift circuit apparatus  
[NASA-CASE-ARC-10269-1] c 10 N72-16172  
Continuously variable voltage controlled phase shifter  
[NASA-CASE-NPO-11129] c 09 N72-33204  
Induction motor control system with voltage controlled oscillator circuit  
[NASA-CASE-MFS-21465-1] c 10 N73-32145  
Low distortion automatic phase control circuit --- voltage controlled phase shifter  
[NASA-CASE-MFS-21671-1] c 33 N74-22885  
Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179  
Fiber optic transmission line stabilization apparatus and method  
[NASA-CASE-NPO-15036-1] c 74 N82-19029

## PHASE SHIFT KEYING

Decision feedback loop for tracking a polyphase modulated carrier  
[NASA-CASE-NPO-13103-1] c 32 N74-20811  
Differential phase shift keyed communication system  
[NASA-CASE-MSC-14065-1] c 32 N74-26654  
Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c 33 N74-27705  
Unbalanced quadrature demodulator  
[NASA-CASE-MSC-14840-1] c 32 N77-24331  
Method and apparatus for quadrature-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c 33 N81-15192

## PHASE SWITCHING

Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570

## PHASE SWITCHING INTERFEROMETERS

Radar antenna system for acquisition and tracking Patent  
[NASA-CASE-XMS-09610] c 07 N71-24625

## PHASE TRANSFORMATIONS

Slug flow magnetohydrodynamic generator  
[NASA-CASE-XLE-02083] c 03 N69-39983  
Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635

- Ten degree Kelvin hydride refrigerator  
[NASA-CASE-NPO-16393-1-CU] c 31 N85-29084
- PHASE VELOCITY**  
Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c 35 N76-15432
- PHASED ARRAYS**  
Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c 10 N73-16206  
Phased array antenna control  
[NASA-CASE-MS-C-14939-1] c 32 N79-11264  
Phase conjugation method and apparatus for an active retrodirective antenna array  
[NASA-CASE-NPO-13641-1] c 32 N79-24210  
Coaxial phased array antenna  
[NASA-CASE-MS-C-16800-1] c 32 N81-14187  
Spiral slotted phased antenna array  
[NASA-CASE-MS-C-18532-1] c 32 N82-27558  
Method and apparatus for self-calibration and phasing of array antenna  
[NASA-CASE-NPO-15920-1] c 33 N85-21493
- PHENOLIC RESINS**  
Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260
- PHENOLS**  
Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029  
Method and device for the detection of phenol and related compounds --- in an electrochemical cell  
[NASA-CASE-LEW-12513-1] c 25 N79-22235
- PHENYLS**  
The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- PHONOCARDIOGRAPHY**  
Phonocardiogram simulator Patent  
[NASA-CASE-XKS-10804] c 05 N71-24606  
Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234
- PHOSPHATES**  
Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047
- PHOSPHAZENE**  
Process for the preparation of polycarbonylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271  
Carboranylcyclotriphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389  
Carboranylmethylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750  
Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- PHOSPHINES**  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MS-C-14903-1] c 27 N78-32256  
Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MS-C-14903-2] c 27 N80-10358  
Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MS-C-14903-3] c 27 N80-24438  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854  
Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347
- PHOSPHONITRILES**  
Metal containing polymers from cyclic tetrameric phenylphosphonitriamides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363
- PHOSPHORS**  
High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206  
Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947  
Flat-panel, full-color electroluminescent display  
[NASA-CASE-LAR-13407-1] c 33 N86-24909
- PHOSPHORUS**  
Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019  
Fire-resistant phosphorus containing polyimides and copolyimides  
[NASA-CASE-ARC-11522-2] c 27 N85-34280
- PHOSPHORUS COMPOUNDS**  
Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272  
The 1-(diorganoxyphosphonyl)methyl-2, 4- and -2, 6-dinitro and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N86-20499
- Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525
- PHOSPHORUS POLYMERS**  
Process for the preparation of polycarbonylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271  
Carboranylcyclotriphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347
- PHOTOABSORPTION**  
Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400
- PHOTOCATHODES**  
Photoelectric energy spectrometer Patent  
[NASA-CASE-XNP-04161] c 14 N71-15599  
III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409
- PHOTOCHEMICAL REACTIONS**  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c 25 N77-32255  
Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148  
Violet-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MS-C-16074-1] c 27 N80-26446
- PHOTOCONDUCTIVE CELLS**  
Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751  
Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913  
Photocapacitive image converter  
[NASA-CASE-LAR-12513-1] c 44 N82-32841
- PHOTOCONDUCTIVITY**  
Photoetching of metal-oxide layers  
[NASA-CASE-ERC-10108] c 06 N72-21094
- PHOTOCONDUCTORS**  
Electronic divider and multiplier using photocells  
[NASA-CASE-XFR-05637] c 09 N71-19480
- PHOTODIODES**  
Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549  
Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139
- PHOTODISSOCIATION**  
Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148
- PHOTOELECTRIC CELLS**  
Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678  
Method of and device for determining the characteristics and flux distribution of micrometeorites --- scanning puncture holes in sheet material with photoelectric cell  
[NASA-CASE-NPO-12127-1] c 91 N74-13130  
Noncontacting method for measuring angular deflection  
[NASA-CASE-LAR-12178-1] c 74 N80-21138  
Photoelectric detection system --- manufacturing automation  
[NASA-CASE-MFS-23776-1] c 33 N82-28545
- PHOTOELECTRIC EFFECT**  
Photoelectric energy spectrometer Patent  
[NASA-CASE-XNP-04161] c 14 N71-15599
- PHOTOELECTRIC EMISSION**  
High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877
- PHOTOELECTRIC MATERIALS**  
Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331  
Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c 35 N74-15090  
Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019  
Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475
- PHOTOELECTRICITY**  
Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019
- PHOTOELECTROCHEMICAL DEVICES**  
Photoelectrochemical electrodes  
[NASA-CASE-NPO-15458-1] c 25 N84-12262  
Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923
- PHOTOELECTRON SPECTROSCOPY**  
Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c 35 N78-10429  
High resolution threshold photoelectron spectroscopy by electron attachment  
[NASA-CASE-NPO-14078-1] c 72 N80-14877  
Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659
- PHOTOGRAPHIC EMULSIONS**  
Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MS-C-18107-1] c 27 N81-25209  
Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432
- PHOTOGRAPHIC EQUIPMENT**  
Apparatus and method for protecting a photographic device Patent  
[NASA-CASE-NPO-10174] c 14 N71-18465  
Method of treating the surface of a glass member  
[NASA-CASE-GSC-12110-1] c 27 N77-32308  
System for forming a quadrified image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c 74 N81-17886
- PHOTOGRAPHIC FILM**  
Film feed camera having a detent means Patent  
[NASA-CASE-LAR-10686] c 14 N71-28935  
Exposure interlock for oscilloscope cameras  
[NASA-CASE-LAR-10319-1] c 14 N73-32322  
Optical noise suppression device and method --- laser light exposing film  
[NASA-CASE-MS-C-12640-1] c 74 N78-31998  
Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c 35 N78-15461  
Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432  
A method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N86-20128
- PHOTOGRAPHIC MEASUREMENT**  
Means and method of measuring viscoelastic strain  
Patent  
[NASA-CASE-XNP-01153] c 32 N71-17845  
Impact measuring technique  
[NASA-CASE-LAR-10913] c 14 N72-16282  
TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c 39 N78-16387
- PHOTOGRAPHIC PROCESSING**  
Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932  
Method of obtaining intensified image from developed photographic films and plates  
[NASA-CASE-MFS-23461-1] c 35 N79-10389
- PHOTOGRAPHIC PROCESSING EQUIPMENT**  
Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c 14 N73-28489
- PHOTOGRAPHIC RECORDING**  
Method of obtaining permanent record of surface flow phenomena Patent  
[NASA-CASE-XLA-01353] c 14 N70-41366  
Focused image holography with extended sources Patent  
[NASA-CASE-ERC-10019] c 16 N71-15551  
Recording and reconstructing focused image holograms Patent  
[NASA-CASE-ERC-10017] c 16 N71-15567  
Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c 16 N71-26154  
Multiple image storing system for high speed projectile holography  
[NASA-CASE-MFS-20596] c 14 N72-17324  
Phototropic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443  
Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c 25 N74-18551

## PHOTOGRAPHY

- System for forming a quadrilled image comprising angularly related fields of view of a three dimensional object  
[NASA-CASE-NPO-14219-1] c 74 N81-17886
- Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1SB] c 52 N85-20639
- PHOTOIONIZATION**  
A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090
- PHOTOLYSIS**  
Solar photolysis of water  
[NASA-CASE-NPO-13675-1] c 44 N77-32580
- Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c 44 N79-11470
- PHOTOMAPPING**  
Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c 74 N77-10899
- PHOTOMASKS**  
Method for applying photographic resists to otherwise incompatible substrates  
[NASA-CASE-MSC-18107-1] c 27 N81-25209
- PHOTOMECHANICAL EFFECT**  
Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400
- PHOTOMETERS**  
Interferometer direction sensor Patent  
[NASA-CASE-NPO-10320] c 14 N71-17655
- Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c 03 N71-20407
- Light position locating system Patent  
[NASA-CASE-XNP-01059] c 23 N71-21821
- Fluid flow meter with comparator reference means Patent  
[NASA-CASE-XGS-01331] c 14 N71-22996
- Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409
- Infrared detectors  
[NASA-CASE-LAR-10728-1] c 14 N73-12445
- Chromato-fluorographic drug detector --- device for detecting and recording fluorescent properties of materials  
[NASA-CASE-ARC-10633-1] c 25 N74-26947
- The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874
- Magneto-optic detection system with noise cancellation  
[NASA-CASE-NPO-11954-1] c 35 N78-29421
- Photodetector array with image plane processing  
[NASA-CASE-LAR-13391-1] c 74 N86-33137
- PHOTOMICROGRAPHY**  
Stereo photomicrography system  
[NASA-CASE-LAR-10176-1] c 14 N72-20380
- Hand-held photomicroscope  
[NASA-CASE-ARC-10468-1] c 14 N73-33361
- Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N85-20250
- PHOTOMULTIPLIER TUBES**  
Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771
- Electronic divider and multiplier using photocells Patent  
[NASA-CASE-XFR-05637] c 09 N71-19480
- Coincidence apparatus for detecting particles  
[NASA-CASE-XLA-07813] c 14 N72-17328
- Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT  
[NASA-CASE-LAR-10320-1] c 09 N72-23172
- Light direction sensor  
[NASA-CASE-NPO-11201] c 14 N72-27409
- Photomultiplier circuit including means for rapidly reducing the sensitivity thereof --- and protection from radiation damage  
[NASA-CASE-ARC-10593-1] c 33 N74-27682
- PHOTON BEAMS**  
Apparatus for photon excited catalysis  
[NASA-CASE-NPO-13566-1] c 25 N77-32255
- PHOTON-ELECTRON INTERACTION**  
Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767
- PHOTONS**  
Solar cell collector  
[NASA-CASE-LEW-12552-1] c 44 N78-25527
- Means and method for calibrating a photon detector utilizing electron-photon coincidence  
[NASA-CASE-NPO-15644-1] c 35 N84-33767
- Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N85-30779

- Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127
- PHOTOSENSITIVITY**  
Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089
- Solar optical telescope dome control system Patent  
[NASA-CASE-MSC-10966] c 14 N71-19568
- Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT  
[NASA-CASE-LAR-10320-1] c 09 N72-23172
- Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c 35 N74-26946
- Apparatus for calibrating an image dissector tube  
[NASA-CASE-MFS-22208-1] c 33 N75-26244
- Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019
- Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826
- PHOTOTRANSISTORS**  
Phototransistor imaging system  
[NASA-CASE-MFS-20809] c 23 N73-13660
- Phototransistor  
[NASA-CASE-MFS-20407] c 09 N73-19235
- PHOTOTROPISM**  
Phototropic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443
- PHOTOVISCOELASTICITY**  
Means and method of measuring viscoelastic strain Patent  
[NASA-CASE-XNP-01153] c 32 N71-17645
- PHOTOVOLTAIC CELLS**  
Plurality of photosensitive cells on a pyramidal base for planetary trackers  
[NASA-CASE-XNP-04180] c 07 N69-39736
- Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c 14 N70-34158
- Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c 03 N71-18698
- Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c 35 N74-15090
- Photovoltaic cell array  
[NASA-CASE-MFS-22458-1] c 44 N77-10635
- Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c 44 N79-11467
- Double-sided solar cell package  
[NASA-CASE-NPO-14199-1] c 44 N79-25482
- Method of construction of a multi-cell solar array  
[NASA-CASE-MFS-23540-1] c 44 N79-26475
- Solar cell with improved N-region contact and method of forming the same  
[NASA-CASE-NPO-14205-1] c 44 N79-31752
- Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550
- Copper doped polycrystalline silicon solar cell  
[NASA-CASE-NPO-14670-1] c 44 N81-19558
- Efficiency of silicon solar cells containing chromium  
[NASA-CASE-NPO-15179-1] c 44 N82-26777
- Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709
- High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764
- Heat transparent high intensity high efficiency solar cell  
[NASA-CASE-LEW-12892-1] c 44 N83-14692
- Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311
- Method of making macrocrystalline or single crystal semiconductor material and products produced thereby --- epitaxial substrates using low melting materials for photovoltaic cells  
[NASA-CASE-NPO-15904-1] c 76 N83-21993
- Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232
- Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113
- Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475
- Thermionic photovoltaic energy converter  
[NASA-CASE-LEW-14077-1] c 44 N85-34441
- GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150
- Method of making macrocrystalline or single crystal semiconductor material  
[NASA-CASE-NPO-15904-1] c 76 N86-28760
- PHOTOVOLTAIC CONVERSION**  
Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019

## PHOTOVOLTAIC EFFECT

- System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MSC-12259-1] c 07 N70-12616
- Use of thin film light detector  
[NASA-CASE-NPO-11432-2] c 35 N74-15090
- Thermionic photovoltaic energy converter  
[NASA-CASE-LEW-14077-1] c 44 N85-34441
- PHthalATES**  
Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- PHthalOCYANIN**  
Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884
- Phthalocyanine polymers  
[NASA-CASE-ARC-11413-1] c 27 N85-21348
- Metal (2,4,4',4'') phthalocyanine tetraamines as curing agents for epoxy resins  
[NASA-CASE-ARC-11424-1] c 27 N85-34281
- Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455
- Process for preparing phthalocyanine polymers  
[NASA-CASE-ARC-11511-2] c 27 N86-19461
- PHYSICAL EXERCISE**  
Restraint system for ergometer  
[NASA-CASE-MFS-21046-1] c 14 N73-27377
- Tilting table for ergometer and for other biomedical devices  
[NASA-CASE-MFS-21010-1] c 05 N73-30078
- Manual actuator --- for spacecraft exercising machines  
[NASA-CASE-MFS-21481-1] c 37 N74-18127
- Therapeutic hand exerciser  
[NASA-CASE-LAR-11667-1] c 52 N76-19785
- PHYSICAL PROPERTIES**  
Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099
- System for monitoring physical characteristics of fluids  
[NASA-CASE-NPO-15400-1] c 34 N83-31993
- PHYSIOLOGICAL EFFECTS**  
Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119
- PHYSIOLOGICAL TESTS**  
Vibrophonocardiograph Patent  
[NASA-CASE-XFR-07172] c 05 N71-27234
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MSC-14180-1] c 52 N76-14757
- PHYSIOLOGY**  
Phonocardiograph transducer Patent  
[NASA-CASE-XMS-05365] c 14 N71-22993
- Method of detecting and counting bacteria  
[NASA-CASE-GSC-11917-2] c 51 N76-29891
- PIERCING**  
Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996
- PIEZOELECTRIC CRYSTALS**  
Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091
- Ultra-stable oscillator with complementary transistors  
[NASA-CASE-GSC-11513-1] c 33 N74-20862
- CDS solid state phase insensitive ultrasonic transducer --- annealing dadium sulfide crystals  
[NASA-CASE-LAR-12304-1] c 35 N80-20559
- PIEZOELECTRIC TRANSDUCERS**  
Force transducer Patent  
[NASA-CASE-XAC-01101] c 14 N70-41957
- Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c 14 N71-17701
- Phonocardiograph transducer Patent  
[NASA-CASE-XMS-05365] c 14 N71-22993
- Semiconductor transducer device  
[NASA-CASE-ERC-10087-2] c 14 N72-31446
- Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
[NASA-CASE-MSC-19672-1] c 38 N79-14398
- Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671
- PIEZOELECTRICITY**  
Missile stage separation indicator and stage initiator Patent  
[NASA-CASE-XLA-00791] c 03 N70-39930
- Piezoelectric pump Patent  
[NASA-CASE-XNP-05429] c 26 N71-21824
- Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334
- Piezoelectric composite materials  
[NASA-CASE-LEW-12582-1] c 76 N83-34796
- PIEZORESISTIVE TRANSDUCERS**  
Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091
- Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490

## PIGMENTS

Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c 18 N71-26772

## PILOT TRAINING

Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c 11 N71-10748  
Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c 09 N75-15662

## PILOTS (PERSONNEL)

System for indicating direction of intruder aircraft  
[NASA-CASE-ERC-10226-1] c 14 N73-16483

## PINCH EFFECT

Toggle mechanism for pinching metal tubes  
[NASA-CASE-GSC-12274-1] c 37 N79-28550

## PINHOLE CAMERAS

Three-dimensional and tomographic imaging device for  
X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281

## PINS

Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505  
Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c 28 N71-29154  
Safety-type locking pin  
[NASA-CASE-MFS-18495] c 15 N72-11385  
Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801

## PINTLES

Metal valve pintle with encapsulated elastomeric body  
Patent  
[NASA-CASE-MSC-12116-1] c 15 N71-17648

## PIPE FLOW

Flat-plate heat pipe  
[NASA-CASE-GSC-11998-1] c 34 N77-32413  
Monogroove heat pipe design: Insulated liquid channel  
with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180  
Fluidic momentum controller  
[NASA-CASE-MSC-20906-1] c 18 N86-19344

## PIPELINES

Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937  
Advanced vapor supply manifold  
[NASA-CASE-LAR-13259-1] c 37 N86-20800

## PIPELINING (COMPUTERS)

Pipelined digital SAR azimuth correlator using hybrid  
FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651  
Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1CU] c 60 N86-23283  
Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1CU] c 60 N86-24224  
Convolver  
[NASA-CASE-NPO-16462-1CU] c 60 N86-24225

## PIPES (TUBES)

Device for determining the accuracy of the flare on a  
flared tube  
[NASA-CASE-XKS-03495] c 14 N69-39785  
Piping arrangement through a double chamber  
structure  
[NASA-CASE-XNP-08882] c 15 N69-39935  
Foldable conduit Patent  
[NASA-CASE-XLE-00620] c 32 N70-41579  
Thermobulb mount Patent  
[NASA-CASE-NPO-10158] c 33 N71-16356  
Method and apparatus for precision sizing and joining  
of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17650  
Sealed separable connection Patent  
[NASA-CASE-NPO-10064] c 15 N71-17693  
Electrical switching device Patent  
[NASA-CASE-NPO-10037] c 09 N71-19610  
Tube dimpling tool Patent  
[NASA-CASE-XMS-06876] c 15 N71-21536  
Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c 25 N71-21694  
Spin forming tubular elbows Patent  
[NASA-CASE-XMF-01083] c 15 N71-22723  
Portable milling tool Patent  
[NASA-CASE-XMF-03511] c 15 N71-22799  
Internal flare angle gauge Patent  
[NASA-CASE-XMF-04415] c 14 N71-24693  
Method and apparatus for precision sizing and joining  
of large diameter tubes Patent  
[NASA-CASE-XMF-05114-3] c 15 N71-24865  
Weld preparation machine Patent  
[NASA-CASE-XKS-07953] c 15 N71-26134  
Method and apparatus for precision sizing and joining  
of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148  
Collapsible antenna boom and transmission line  
Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191  
Tube fabricating process  
[NASA-CASE-LAR-10203-1] c 15 N72-16330

Torsional disconnect unit  
[NASA-CASE-NPO-10704] c 15 N72-20445  
Open type urine receptacle  
[NASA-CASE-MSC-12324-1] c 05 N72-22093  
Method for measuring cutaneous sensorv perception  
[NASA-CASE-MSC-13609-1] c 05 N72-25122  
Low mass truss structure  
[NASA-CASE-LAR-10546-1] c 11 N72-25287  
Honeycomb panels formed of minimal surface periodic  
tubule layers  
[NASA-CASE-ERC-10364] c 18 N72-25540  
Honeycomb core structures of minimal surface tubule  
sections  
[NASA-CASE-ERC-10363] c 18 N72-25541  
Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129  
Cable restraint  
[NASA-CASE-LAR-10129-1] c 15 N73-25512  
Method of fabricating a twisted composite  
superconductor  
[NASA-CASE-LEW-11015] c 26 N73-32571  
Open tube guideway for high speed air cushioned  
vehicles  
[NASA-CASE-LAR-10256-1] c 85 N74-34672  
Method for fabricating a mass spectrometer inlet leak  
[NASA-CASE-GSC-12077-1] c 35 N77-24455  
Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491  
Open ended tubing cutters  
[NASA-CASE-MSC-18538-1] c 37 N82-26672  
Method of making an ion beam sputter-etched  
ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095  
Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085  
Fluid leak indicator  
[NASA-CASE-MSC-20783-1] c 35 N86-20756  
Self-contained, single-use hose and tubing cleaning  
module  
[NASA-CASE-MSC-20857-1] c 37 N86-20807  
Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N86-24935  
Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736

## PISTON ENGINES

Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c 37 N76-29590  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370  
Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640  
Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574

## PISTONS

Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042  
Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465  
Collapsible pistons  
[NASA-CASE-MSC-13789-1] c 11 N73-32152  
Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11188-1] c 02 N74-20646  
Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790  
Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318  
Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c 37 N81-22360  
Stirling cycle cryogenic cooler --- magnetically  
suspended pistons  
[NASA-CASE-GSC-12697-1] c 31 N82-11312  
Gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c 44 N83-14693  
Centrifugal-reciprocating compressor  
[NASA-CASE-NPO-14597-2] c 37 N84-28081  
Lightweight piston  
[NASA-CASE-LAR-13150-1] c 24 N85-28975

## PITCH (INCLINATION)

Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c 07 N77-17059  
Velocity vector control system augmented with direct  
lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106  
Pitch attitude stabilization system utilizing engine  
pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c 08 N81-26152  
Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N86-24700

## PIVOTS

Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878  
Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492  
Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605

Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288

## PLANAR STRUCTURES

Window defect planar mapping technique  
[NASA-CASE-MSC-19442-1] c 74 N77-10899  
Method and apparatus for preparing multiconductor  
cable with flat conductors  
[NASA-CASE-MFS-10946-1] c 31 N79-21226  
High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764

## PLANE WAVES

Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130

## PLANETARY ATMOSPHERES

Method of planetary atmospheric investigation using a  
split-trajectory dual flyby mode Patent  
[NASA-CASE-XAC-08494] c 30 N71-15990  
Flow field simulation Patent  
[NASA-CASE-LAR-11138] c 12 N71-20436  
Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991

## PLANETARY GRAVITATION

Impact simulator Patent  
[NASA-CASE-XLA-00493] c 11 N70-34786  
Means for visually indicating flight paths of vehicles  
between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00708] c 14 N70-35394

## PLANETARY LANDING

Parachute glider Patent  
[NASA-CASE-XLA-00898] c 02 N70-36804  
Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085

## PLANETARY ORBITS

Flexible foam erectable space structures Patent  
[NASA-CASE-XLA-00686] c 31 N70-34135  
Erectable modular space station Patent  
[NASA-CASE-XLA-00678] c 31 N70-34296

## PLANETARY RADIATION

Attitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880

## PLANETARY SURFACES

Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118

## PLANTS (BOTANY)

Rotary plant growth accelerating apparatus ---  
weightlessness  
[NASA-CASE-ARC-10722-1] c 51 N75-25503  
Molten salt pyrolysis of latex --- synthetic hydrocarbon  
fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261  
Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045

## PLASMA ACCELERATION

Apparatus for increasing ion engine beam density  
Patent  
[NASA-CASE-XLE-00519] c 28 N70-41576  
Coaxial high density, hypervelocity plasma generator and  
accelerator with ionizable metal disc  
[NASA-CASE-MFS-20589] c 25 N72-32888

## PLASMA ACCELERATORS

Plasma accelerator Patent  
[NASA-CASE-XLA-00675] c 25 N70-33267  
Continuously operating induction plasma accelerator  
Patent  
[NASA-CASE-XLA-01354] c 25 N70-36946  
Crossed-field MHD plasma generator/ accelerator  
Patent  
[NASA-CASE-XLA-03374] c 25 N71-15562  
Self-repeating plasma generator having communicating  
annular and linear arc discharge passages Patent  
[NASA-CASE-XLA-03103] c 25 N71-21693  
Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184  
Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c 75 N76-14931

## PLASMA CONTROL

Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-28710  
Self-energized plasma compressor --- for compressing  
plasma discharged from coaxial plasma generator  
[NASA-CASE-MFS-22145-1] c 75 N75-13625

## PLASMA CYLINDERS

Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c 09 N71-33519

## PLASMA DENSITY

Focusing system for an ion source having apertured  
electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618  
Measurement of plasma temperature and density using  
radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156  
Hollow cathode apparatus  
[NASA-CASE-NPO-15560-1] c 33 N85-21491

**PLASMA DIAGNOSTICS**

- Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c 25 N69-39884
- Apparatus for measuring conductivity and velocity of plasma utilizing a plurality of sensing coils positioned in the plasma Patent  
[NASA-CASE-XAC-05695] c 25 N71-16073
- Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156
- PLASMA DYNAMICS**
- Apparatus for measuring conductivity and velocity of plasma utilizing a plurality of sensing coils positioned in the plasma Patent  
[NASA-CASE-XAC-05695] c 25 N71-16073
- Self-energized plasma compressor --- for compressing plasma discharged from coaxial plasma generator  
[NASA-CASE-MFS-22145-1] c 75 N75-13625
- PLASMA ENGINES**
- Plasma device feed system Patent  
[NASA-CASE-XLE-02902] c 25 N71-21694
- PLASMA GENERATORS**
- Method and apparatus for producing a plasma Patent  
[NASA-CASE-XLA-00147] c 25 N70-34661
- Crossed-field MHD plasma generator/ accelerator Patent  
[NASA-CASE-XLA-03374] c 25 N71-15562
- Coaxial high density, hypervelocity plasma generator and accelerator with ionizable metal disc  
[NASA-CASE-MFS-20589] c 25 N72-32688
- Self-energized plasma compressor --- for compressing plasma discharged from coaxial plasma generator  
[NASA-CASE-MFS-22145-1] c 75 N75-13625
- Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c 75 N76-17951
- Continuous plasma laser --- method and apparatus for producing intense, coherent, monochromatic light from low temperature plasma  
[NASA-CASE-XNP-04167-3] c 36 N77-19416
- PLASMA GUNS**
- Method of making a diffusion bonded refractory coating Patent  
[NASA-CASE-XLE-01604-2] c 15 N71-15610
- PLASMA JETS**
- Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c 25 N75-12087
- Combination automatic-starting electrical plasma torch and gas shutoff valve --- for satellite attitude control  
[NASA-CASE-XLE-10717] c 37 N75-29426
- Plasma cleaning device --- designed for high vacuum environments  
[NASA-CASE-MFS-22906-1] c 75 N78-27913
- PLASMA LAYERS**
- Electrostatic plasma modulator for space vehicle re-entry communication Patent  
[NASA-CASE-XLA-01400] c 07 N70-41331
- Means for communicating through a layer of ionized gases Patent  
[NASA-CASE-XLA-01127] c 07 N70-41372
- Reentry communication by material addition Patent  
[NASA-CASE-XLA-01552] c 07 N71-11284
- PLASMA POTENTIALS**
- Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c 33 N77-10429
- PLASMA PROBES**
- Probes having ring and primary sensor at same potential to prevent collection of stray wall currents in ionized gases  
[NASA-CASE-XLE-00690] c 25 N69-39884
- Small plasma probe Patent  
[NASA-CASE-XLE-02578] c 25 N71-20747
- PLASMA PROPULSION**
- Method of making dished ion thruster grids  
[NASA-CASE-LEW-11694-1] c 20 N75-18310
- Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256
- PLASMA RADIATION**
- Means for measuring the electron density gradients of the plasma sheath formed around a space vehicle Patent  
[NASA-CASE-XLA-06232] c 25 N71-20563
- Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c 25 N72-24753
- PLASMA SHEATHS**
- Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c 09 N71-16086
- Means for measuring the electron density gradients of the plasma sheath formed around a space vehicle Patent  
[NASA-CASE-XLA-06232] c 25 N71-20563

**PLASMA SPRAYING**

- Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453
- Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- PLASMA TEMPERATURE**
- Measurement of plasma temperature and density using radiation absorption  
[NASA-CASE-ARC-10598-1] c 75 N74-30156
- PLASMA-ELECTROMAGNETIC INTERACTION**
- Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405
- PLASMAS (PHYSICS)**
- Apparatus for measuring conductivity and velocity of plasma utilizing a plurality of sensing coils positioned in the plasma Patent  
[NASA-CASE-XAC-05695] c 25 N71-16073
- Hollow cathode apparatus  
[NASA-CASE-NPO-15560-1] c 33 N85-21491
- PLASMONS**
- Inelastic tunnel diodes  
[NASA-CASE-LEW-13833-1] c 33 N85-21492
- Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768
- PLASTIC COATINGS**
- Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895
- Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c 15 N73-27405
- Silicon nitride coated, plastic covered solar cell  
[NASA-CASE-LEW-11496-1] c 44 N77-14580
- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers  
[NASA-CASE-ARC-10915-2] c 27 N79-18052
- Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N85-21360
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- PLASTIC DEFORMATION**
- Light intensity strain analysis  
[NASA-CASE-LAR-10765-1] c 32 N73-20740
- Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170
- PLASTIC TAPES**
- Thermocouple tape  
[NASA-CASE-LEW-11072-1] c 14 N73-24472
- PLASTICIZERS**
- Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c 44 N78-25530
- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229
- Method of bonding plasticized elastomer to metal and articles produced thereby  
[NASA-CASE-MFS-25181-1] c 27 N82-24340
- Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708
- PLASTICS**
- Method for forming plastic materials Patent  
[NASA-CASE-XMS-05516] c 15 N71-17803
- Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c 15 N71-22713
- Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022
- Dielectric molding apparatus Patent  
[NASA-CASE-LAR-10121-1] c 15 N71-26721
- Radar calibration sphere  
[NASA-CASE-XLA-11154] c 07 N72-21117
- Molding apparatus --- for thermosetting plastic compositions  
[NASA-CASE-LAR-10489-2] c 31 N74-32920
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- PLATENS**
- Compression test apparatus  
[NASA-CASE-MSC-18723-1] c 35 N83-21312
- PLATES (STRUCTURAL MEMBERS)**
- Foil seal  
[NASA-CASE-XLE-05130] c 15 N69-21362
- Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477
- Microwave dichroic plate  
[NASA-CASE-GSC-12171-1] c 33 N79-28416

- Floating nut retention system  
[NASA-CASE-MSC-16938-1] c 37 N80-23653
- A method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N86-20128
- Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630
- PLATING**
- Selective plating of etched circuits without removing previous plating Patent  
[NASA-CASE-XGS-03120] c 15 N71-24047
- Peen plating  
[NASA-CASE-GSC-11163-1] c 15 N73-32360
- Scanning nozzle plating system --- for etching or plating metals on substrates without masking  
[NASA-CASE-NPO-11758-1] c 31 N74-23065
- Method for depositing an oxide coating  
[NASA-CASE-LEW-13131-1] c 44 N83-10494
- PLATINUM**
- Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c 33 N75-27252
- Platinum resistance thermometer circuit  
[NASA-CASE-MSC-12327-1] c 35 N77-27368
- PLATINUM ALLOYS**
- Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338
- PLAYBACKS**
- Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426
- Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c 35 N79-16246
- PLENUM CHAMBERS**
- Air cushion lift pad Patent  
[NASA-CASE-MFS-14685] c 31 N71-15689
- Gas filter mounting structure  
[NASA-CASE-MSC-12297] c 14 N72-23457
- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605
- Sonic levitation apparatus  
[NASA-CASE-MFS-25828-1] c 71 N84-28568
- PLETHYSMOGRAPHY**
- Readout electrode assembly for measuring biological impedance  
[NASA-CASE-ARC-10816-1] c 35 N76-24525
- Apparatus for determining changes in limb volume  
[NASA-CASE-MSC-18759-1] c 52 N83-27578
- PLOTTERS**
- Automated equipotential plotter  
[NASA-CASE-NPO-11134] c 09 N72-21246
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341
- PLOTTING**
- Instrument for measuring potentials on two dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421
- PLUG NOZZLES**
- Cascade plug nozzle --- for jet noise reduction  
[NASA-CASE-LAR-11674-1] c 07 N76-18117
- Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873
- PLUGS**
- Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503
- Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505
- Gas regulator Patent  
[NASA-CASE-NPO-10298] c 12 N71-17661
- Heated porous plug microthruster  
[NASA-CASE-GSC-10640-1] c 28 N72-18766
- High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-18526-1] c 37 N82-24494
- PNEUMATIC CONTROL**
- Pneumatic system for controlling and actuating pneumatic cyclic devices  
[NASA-CASE-XMS-04843] c 03 N69-21469
- Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c 11 N69-24321
- Valve actuator Patent  
[NASA-CASE-XHQ-01208] c 15 N70-35409
- Quick release hook tape Patent  
[NASA-CASE-XMS-10660-1] c 15 N71-25975
- Foot pedal operated fluid type exercising device  
[NASA-CASE-MSC-11561-1] c 05 N73-32014
- Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c 37 N75-32465
- PNEUMATIC EQUIPMENT**
- High pressure air valve Patent  
[NASA-CASE-MSC-11010] c 15 N71-19485
- Inflatable support structure Patent  
[NASA-CASE-XLA-01731] c 32 N71-21045



- Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089
- Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c 14 N71-23227
- Pneumatic amplifier Patent  
[NASA-CASE-MS-12121-1] c 15 N71-27147
- Life raft stabilizer  
[NASA-CASE-MS-12393-1] c 02 N73-26006
- Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136
- Pneumatic load compensating or controlling system  
[NASA-CASE-ARC-10907-1] c 37 N75-32465
- Improved tire/wheel concept --- pneumatic aircraft tire  
[NASA-CASE-LAR-11695-2] c 37 N80-18402
- Gas-to-hydraulic power converter  
[NASA-CASE-MS-18794-1] c 44 N83-14693
- System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346
- Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029
- Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443
- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389
- Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-25429-1] c 18 N86-20469
- POINT SOURCES**
- Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980
- X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHO-04106] c 14 N70-40240
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341
- POINTING CONTROL SYSTEMS**
- Rotable accurate reflector system for telescopes Patent  
[NASA-CASE-NPO-10468] c 23 N71-33229
- All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399
- Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c 37 N78-27424
- Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c 35 N79-26372
- Solar tracking system  
[NASA-CASE-MFS-23999-1] c 44 N81-24520
- POINTS (MATHEMATICS)**
- Method of and apparatus for generating an interstitial point in a data stream having an even number of data points  
[NASA-CASE-MFS-25319-1] c 60 N85-33701
- POLAR ORBITS**
- Cartwheel satellite synchronization system Patent  
[NASA-CASE-XGS-05579] c 31 N71-15676
- POLARIMETERS**
- Polarimeter for transient measurement Patent  
[NASA-CASE-XNP-08883] c 23 N71-16101
- Interferometer-polarimeter  
[NASA-CASE-NPO-11239] c 14 N73-12446
- POLARITY**
- Positive dc to negative dc converter Patent  
[NASA-CASE-XMF-08217] c 03 N71-23239
- Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862
- Precision rectifier with FET switching means Patent  
[NASA-CASE-ARC-10101-1] c 09 N71-33109
- POLARIZATION (WAVES)**
- System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c 32 N75-24982
- Multifrequency broadband polarized horn antenna  
[NASA-CASE-NPO-14588-1] c 32 N81-25278
- Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381
- POLARIZED ELECTROMAGNETIC RADIATION**
- Antenna beam-shaping apparatus Patent  
[NASA-CASE-XNP-00611] c 09 N70-35219
- Parabolic reflector horn feed with spillover correction Patent  
[NASA-CASE-XNP-00540] c 09 N70-35382
- Antenna feed system for receiving circular polarization and transmitting linear polarization  
[NASA-CASE-NPO-14362-1] c 32 N80-16261
- Coaxial phased array antenna  
[NASA-CASE-MS-16800-1] c 32 N81-14187
- POLARIZED LIGHT**
- Polarization compensator for optical communications  
[NASA-CASE-GSC-11782-1] c 74 N76-30053
- Visible and infrared polarization ratio spectrophotometer  
[NASA-CASE-LAR-12285-1] c 35 N80-28687
- POLARIZED RADIATION**
- Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685
- POLARIZERS**
- Partial polarizer filter  
[NASA-CASE-GSC-12225-1] c 74 N79-14891
- Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647
- POLES**
- Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N86-20804
- POLISHING**
- Conforming polisher for aspheric surface of revolution Patent  
[NASA-CASE-XGS-02884] c 15 N71-22705
- Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24148
- POLLUTION CONTROL**
- System for minimizing internal combustion engine pollution emission  
[NASA-CASE-NPO-13402-1] c 37 N76-18457
- Combustion engine --- for air pollution control  
[NASA-CASE-NPO-13671-1] c 37 N77-31497
- Supercritical fuel injection system  
[NASA-CASE-LEW-12990-1] c 07 N81-29129
- Apparatus and method for destructive removal of particles contained in flowing fluid  
[NASA-CASE-NPO-15426-1] c 35 N84-17555
- POLLUTION MONITORING**
- Fluorescence detector for monitoring atmospheric pollutants  
[NASA-CASE-NPO-13231-1] c 45 N75-27585
- Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656
- Indicator providing continuous indication of the presence of a specific pollutant in air  
[NASA-CASE-NPO-13474-1] c 45 N76-21742
- Method for detecting pollutants --- through chemical reactions and heat treatment  
[NASA-CASE-LAR-11405-1] c 45 N76-31714
- Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407
- POLYAMIDE RESINS**
- Vitro-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MS-16074-1] c 27 N80-26446
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746
- Heat resistant protective hand covering  
[NASA-CASE-MS-20261-1] c 54 N84-28484
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-1] c 27 N85-20123
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N85-21360
- Fire and heat resistant laminating resins based on maleimide and citraconimide substituted 1-(diorgano oxyphosphoryl)methyl-2,4- and 2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-1] c 27 N85-21364
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- POLYBENZIMIDAZOLE**
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232
- POLYBUTADIENE**
- New polymers of perfluorobutadiene and method of manufacture Patent application  
[NASA-CASE-NPO-10863] c 06 N70-11251
- Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252
- Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c 28 N79-14228
- POLYCARBONATES**
- Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190
- Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841
- POLYCRYSTALS**
- Fabrication of polycrystalline solar cells on low-cost substrates  
[NASA-CASE-GSC-12022-1] c 44 N76-28635
- Process for utilizing low-cost graphite substrates for polycrystalline solar cells  
[NASA-CASE-GSC-12022-2] c 44 N78-24609
- Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c 76 N79-21910
- Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N86-21684
- POLYESTERS**
- Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25829
- Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c 31 N74-32917
- Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N86-26435
- Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- POLYETHER RESINS**
- Polyurethanes from fluoroalkyl propylene glycol polyethers  
[NASA-CASE-MFS-10506] c 06 N73-30100
- Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c 06 N73-30101
- Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c 06 N73-30102
- Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370
- Phenoxy resins containing pendent ethynyl groups and cured resins obtained therefrom  
[NASA-CASE-LAR-13262-1] c 23 N85-28973
- Polyether-polyester graft copolymer  
[NASA-CASE-LAR-13447-1] c 27 N86-26435
- POLYIMIDE RESINS**
- Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c 27 N75-29263
- Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c 27 N78-17205
- Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety  
[NASA-CASE-ARC-11040-2] c 24 N78-27184
- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c 27 N79-33316
- Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296
- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392
- Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-1] c 27 N84-27885
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-2] c 27 N85-21347
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350
- Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352
- Chemical control of nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-2] c 25 N85-28982
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039
- High temperature resistant polyimide from tetra ester, diamine, diester and N-arylnadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457
- POLYIMIDES**
- Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812
- Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c 27 N74-23125
- Polyimides of ether-linked aryl tetracarboxylic dianhydrides  
[NASA-CASE-MFS-22355-1] c 23 N78-15268
- Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c 27 N78-32261



- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- Catalysts for polyimide foams from aromatic isocyanates and aromatic dianhydrides --- flame retardant foams  
[NASA-CASE-ARC-11107-1] c 25 N80-16116
- Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158
- Method for preparing addition type polyimide preregs  
[NASA-CASE-LAR-12054-2] c 27 N81-14078
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240
- Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041
- Process for preparing solvent resistant, thermoplastic aromatic poly(imidesulfone)  
[NASA-CASE-LAR-12858-2] c 27 N85-20124
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N85-20128
- Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349
- Fire resistant polymers based on 1-(diorgano oxyphosphoryl)methyl-2,4- and 2,6-diamino benzenes  
[NASA-CASE-ARC-11512-2] c 27 N85-21362
- Fire-resistant phosphorus containing polyimides and copolyimides  
[NASA-CASE-ARC-11522-2] c 27 N85-34280
- Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456
- High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561
- Polyimides containing ATBN elastomers and the process for preparing same  
[NASA-CASE-LAR-13178-1] c 27 N86-20565
- Copolyimides with a combination of flexibilizing groups  
[NASA-CASE-ARC-13354-1] c 27 N86-20566
- Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N86-21685
- Poly(carbonate-mide) polymer  
[NASA-CASE-LAR-13292-1] c 27 N86-24841
- Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416
- Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N86-25478
- Oxidation protecting coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N86-26434
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039

**POLYISOBUTYLENE**

- Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710

**POLYISOPRENES**

- Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045

**POLYMER CHEMISTRY**

- Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244
- Synthesis of siloxane-containing epoxy polymers Patent  
[NASA-CASE-MFS-13994-1] c 06 N71-11240
- Apparatus for testing polymeric materials Patent  
[NASA-CASE-XNP-09699] c 06 N71-24607
- Polyimide adhesives  
[NASA-CASE-LAR-11397-1] c 27 N75-29263
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c 27 N78-15276
- Polyimide adhesives  
[NASA-CASE-LAR-12181-1] c 27 N78-17205
- Insoluble silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c 27 N79-21190
- Fluorine-containing polyformals  
[NASA-CASE-XMF-06900-1] c 27 N79-21191
- In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c 44 N79-25481

- Bifunctional monomers having terminal oxime and cyano or amidine groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c 27 N81-24257
- Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c 27 N81-24258
- Process for the preparation of polycarbonylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271
- Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272
- Preparation of crosslinked 1,2,4-oxadiazole polymer  
[NASA-CASE-ARC-11253-2] c 27 N82-24338
- Preparation of perfluorinated 1,2,4-oxadiazoles  
[NASA-CASE-ARC-11267-2] c 23 N82-28353
- Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-6] c 25 N85-30039
- The 1-(diorganooxyphosphonyl)methyl-2, 4- and -2, 6-dinitro and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N86-20499
- Amine terminated bisaspartimide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726

**POLYMER MATRIX COMPOSITES**

- Intumescent-ablator coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c 24 N78-27180
- Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560

**POLYMER PHYSICS**

- High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1-SB] c 24 N85-30033

**POLYMERIC FILMS**

- Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461
- Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975
- Thermoelectric radiometer utilizing polymer film  
[NASA-CASE-ARC-10138-1] c 14 N72-24477
- Apparatus and method for skin packaging articles  
[NASA-CASE-MFS-20855] c 15 N73-27405
- Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c 44 N76-14600
- Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c 27 N79-14214
- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c 27 N80-23452
- Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160
- Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440
- Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N85-20128
- Process for preparing highly optically transparent-colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N85-21360
- Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455
- Polysiloxanes from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N86-19462
- High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561
- A water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N86-20755
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039

- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727

**POLYMERIZATION**

- New polymers of perfluorobutadiene and method of manufacture Patent application  
[NASA-CASE-NPO-10863] c 06 N70-11251
- Method of polymerizing perfluorobutadiene Patent application  
[NASA-CASE-NPO-10447] c 06 N70-11252
- Process for interfacial polymerization of pyromellitic dianhydride and 1,2,4, 5-tetraamino-benzene Patent  
[NASA-CASE-XLA-03104] c 06 N71-11235
- Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238
- Direct synthesis of polymeric schiff bases from two amines and two aldehydes Patent  
[NASA-CASE-XMF-08655] c 06 N71-11239
- Azine polymers and process for preparing the same Patent  
[NASA-CASE-XMF-08656] c 06 N71-11242
- Synthesis of polymeric schiff bases by reaction of acetals and amine compounds Patent  
[NASA-CASE-XMF-08652] c 06 N71-11243
- Elastomeric silazane polymers and process for preparing the same Patent  
[NASA-CASE-XMF-04133] c 06 N71-20717
- Reaction of fluorine with polyperfluoropolyenes  
[NASA-CASE-NPO-10862] c 06 N72-22107
- Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups  
[NASA-CASE-MFS-20979] c 06 N72-25151
- Polymers of perfluorobutadiene and method of manufacture  
[NASA-CASE-NPO-10863-2] c 06 N72-25152
- Fluorohydroxy ethers  
[NASA-CASE-MFS-10507] c 06 N73-30101
- Highly fluorinated polymers  
[NASA-CASE-MFS-11492] c 06 N73-30102
- Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c 25 N75-12087
- Utilization of oxygen difluoride for syntheses of fluoropolymers  
[NASA-CASE-NPO-12061-1] c 27 N76-16228
- Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c 27 N78-17214
- Polymeric foams from cross-linkable poly-n-arylenebenzimidazoles  
[NASA-CASE-ARC-11008-1] c 27 N78-31232
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- Preparation of heterocyclic block copolymer omega-diamidoximes  
[NASA-CASE-ARC-11060-1] c 27 N79-22300
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307
- Mixed diamines for lower melting addition polyimide preparation and utilization  
[NASA-CASE-LAR-12054-1] c 27 N79-33316
- Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c 27 N80-10358
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c 27 N80-24438
- Perfluoroalkyl polytriazines containing pendent iododifluoromethyl groups  
[NASA-CASE-ARC-11241-1] c 25 N81-14016
- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104
- Process for the preparation of fluorine containing crosslinked elastomeric polytriazine and product so produced  
[NASA-CASE-ARC-11248-1] c 27 N81-17259
- The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262
- Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242
- Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244
- Carboranyl cyclotriphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396

- The 1 - (dialkoxyposphonyl)methyl -2,4- and -2,6-dinitro- and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-1] c 23 N83-28076
- Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041
- Elastomer-modified phosphorus-containing imide resins  
[NASA-CASE-ARC-11400-1] c 27 N84-14322
- Process for preparing phthalocyanine polymers  
[NASA-CASE-ARC-11511-1] c 23 N84-16259
- Amine terminated bisaspartimides, process for preparation thereof, and polymers thereof  
[NASA-CASE-ARC-11421-1] c 27 N84-16340
- Fire resistant polymers based on 1-(dialkoxyposphonyl)methyl-2,4- and -2,6-diaminobenzenes  
[NASA-CASE-ARC-11512-1] c 27 N84-20702
- Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709
- Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746
- Polypheylene ethers with imide linking groups  
[NASA-CASE-LAR-12980-1] c 27 N84-22749
- Carboranymethylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884
- Phthalocyanine polymers  
[NASA-CASE-ARC-11413-1] c 27 N85-21348
- Fire resistant polymers based on 1-(diorgano oxyposphonyl)methyl-2,4- and 2,6-diamino benzenes  
[NASA-CASE-ARC-11512-2] c 27 N85-21362
- Fire and heat resistant laminating resins based on maleimido and citraconimido substituted 1-(diorgano oxyposphonyl)methyl-2,4- and 2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-1] c 27 N85-21364
- Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- Maleimido substituted aromatic cyclotriphosphazenes  
[NASA-CASE-ARC-11428-1] c 23 N86-19376
- Process for preparing phthalocyanine polymers  
[NASA-CASE-ARC-11511-2] c 27 N86-19461
- Polyanilines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N86-19462
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675
- Process for crosslinking methylene-containing aromatic polymers with ionizing radiation  
[NASA-CASE-LAR-13448-1] c 27 N86-24840
- Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416
- Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N86-25477
- Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N86-25478
- Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- Polymer of phosphonimethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525
- Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526
- POLYMERS**
- Preparation of ordered poly /arylenesiloxane/ polymers  
[NASA-CASE-XMF-10753] c 06 N71-11237
- Aromatic diamine-aromatic dialdehyde high molecular weight Schiff base polymers prepared in a monofunctional Schiff base Patent  
[NASA-CASE-XMF-03074] c 06 N71-24740
- Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161
- Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701] c 06 N71-28620
- Solid state thermal control polymer coating Patent  
[NASA-CASE-XLA-01745] c 33 N71-28903
- Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c 06 N72-25147
- Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c 27 N73-16764
- Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710
- Novel polymers and method of preparing same  
[NASA-CASE-NPO-10998-1] c 06 N73-32029
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- Oil and fat absorbing polymers  
[NASA-CASE-NPO-11609-2] c 27 N77-31308
- Method for separating biological cells --- suspended in aqueous polymer systems  
[NASA-CASE-MFS-23883-1] c 51 N80-16715
- Chelate-modified polymers for atmospheric gas chromatography  
[NASA-CASE-ARC-11154-1] c 25 N80-23383
- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437
- Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-3] c 27 N84-22745
- Carboranymethylene-substituted phosphazenes and polymers thereof  
[NASA-CASE-ARC-11370-1] c 27 N84-22750
- Process for improving moisture resistance of epoxy resins by addition of chromium ions  
[NASA-CASE-LAR-13226-1] c 27 N85-34282
- Oxidation protecting coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N86-26434
- Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526
- POLYMETHYL METHACRYLATE**
- Durable antistatic coating for polymethylmethacrylate  
[NASA-CASE-NPO-13867-1] c 27 N78-14164
- Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses  
[NASA-CASE-ARC-11039-1] c 74 N78-32854
- POLYPHENYL ETHER**
- Polypheylene ethers with imide linking groups  
[NASA-CASE-LAR-12980-1] c 27 N84-22749
- POLYPHENYLS**
- Polypheylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040
- Polypheylene ethers with imide linking groups  
[NASA-CASE-LAR-12980-1] c 27 N84-22749
- POLYSACCHARIDES**
- Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236
- POLYTETRAFLUOROETHYLENE**
- Method and apparatus for bonding a plastics sleeve onto a metallic body Patent  
[NASA-CASE-XLA-01262] c 15 N71-21404
- Diffusely reflecting paints including polytetrafluoroethylene and method of manufacture  
[NASA-CASE-GSC-12883-1] c 27 N85-29044
- POLYURETHANE FOAM**
- Flexible foam erectable space structures Patent  
[NASA-CASE-XLA-00686] c 31 N70-34135
- Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739
- Flexible fire retardant foam  
[NASA-CASE-ARC-10180-1] c 28 N72-20767
- Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c 27 N74-12814
- Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c 27 N76-15310
- Mixing insert for foam dispensing apparatus  
[NASA-CASE-MFS-20607-1] c 37 N76-19436
- Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797
- POLYURETHANE RESINS**
- Hydroxy terminated perfluoro ethers Patent  
[NASA-CASE-NPO-10768] c 06 N71-27254
- Polyurethane resins from hydroxy terminated perfluoro ethers  
[NASA-CASE-NPO-10768-2] c 06 N72-27144
- Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-2] c 06 N72-27151
- Polyurethanes of fluorine containing polycarbonates  
[NASA-CASE-MFS-10512] c 06 N73-30099
- Polyurethanes from fluoroalkyl propylene glycol polyethers  
[NASA-CASE-MFS-10506] c 06 N73-30100
- Fluorine containing polyurethane  
[NASA-CASE-MFS-10509] c 06 N73-30103
- Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-1] c 06 N73-33076
- Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213
- POLYVINYL ALCOHOL**
- In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c 44 N79-25481
- Method of cross-linking polyvinyl alcohol and other water soluble resins  
[NASA-CASE-LEW-13103-1] c 27 N80-32516
- In-situ cross linking of polyvinyl alcohol --- application to battery separator films  
[NASA-CASE-LEW-13135-2] c 27 N81-24257
- Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c 44 N81-27615
- Cross-linked polyvinyl alcohol and method of making same  
[NASA-CASE-LEW-13101-2] c 23 N81-29160
- Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188
- PONDS**
- Stable density stratification solar pond  
[NASA-CASE-NPO-15419-2] c 44 N85-30474
- PORCELAIN**
- Refractory porcelain enamel passive control coating for high temperature alloys  
[NASA-CASE-MFS-22324-1] c 27 N75-27160
- POROSITY**
- Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c 37 N75-26371
- POROUS MATERIALS**
- Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468
- Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c 17 N71-23046
- Fluid lubricant system Patent  
[NASA-CASE-XNP-03972] c 15 N71-23048
- Method and device for detecting voids in low density material Patent  
[NASA-CASE-MFS-20044] c 14 N71-28993
- Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c 17 N71-29137
- Compressible biomedical electrode  
[NASA-CASE-MSC-13648] c 05 N72-27103
- Porous electrode comprising a bonded stack of pieces of corrugated metal foil  
[NASA-CASE-GSC-11368-1] c 09 N73-32108
- Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c 44 N74-19692
- Fluid valve assembly  
[NASA-CASE-MSC-12731-1] c 37 N78-25426
- Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540
- Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c 24 N83-13171
- Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c 24 N83-13172
- Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176
- A water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N86-20755
- POROUS PLATES**
- Method of producing porous tungsten ionizers for ion rocket engines Patent  
[NASA-CASE-XLE-00455] c 28 N70-38197
- PORPHYRINS**
- Method and apparatus for eliminating luminol interference material  
[NASA-CASE-MSC-16260-1] c 51 N80-16714
- PORTABLE EQUIPMENT**
- Split welding chamber Patent  
[NASA-CASE-LEW-11531] c 15 N71-14932
- Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721
- Weld preparation machine Patent  
[NASA-CASE-XKS-07953] c 15 N71-26134
- Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148
- Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654
- Boring bar drive mechanism Patent  
[NASA-CASE-XLA-03661] c 15 N71-33518
- One hand backpack harness  
[NASA-CASE-LAR-10102-1] c 05 N72-23085
- Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c 14 N72-25413
- Self-recording portable soil penetrometer  
[NASA-CASE-MFS-20774] c 14 N73-19420
- Hand-held photomicroscope  
[NASA-CASE-ARC-10468-1] c 14 N73-33361

- System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c 37 N75-33395  
Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c 37 N76-18454  
Portable electrophoresis apparatus using minimum electrolyte  
[NASA-CASE-NPO-13274-1] c 25 N79-10163  
Portable heatable container  
[NASA-CASE-NPO-14237-1] c 44 N80-20808  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599  
Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c 33 N81-25299  
Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949  
Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928  
Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766  
Portable pallet weighing apparatus  
[NASA-CASE-GSC-12789-1] c 35 N85-20294  
Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631  
Portable 90 degree proof loading device  
[NASA-CASE-MS-C-20250-1] c 35 N86-19581  
Acoustic guide for noise transmission testing of aircraft  
[NASA-CASE-LAR-13111-1-CU] c 71 N86-20086
- PORTABLE LIFE SUPPORT SYSTEMS**  
Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MS-C-16182-1] c 54 N80-10799
- PORTS (OPENINGS)**  
Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256  
Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343  
Advanced vapor supply manifold  
[NASA-CASE-LAR-13259-1] c 37 N86-20800
- POSITION (LOCATION)**  
Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958  
Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c 30 N71-16090  
Emergency escape system Patent  
[NASA-CASE-XKS-07814] c 15 N71-27067  
Position location system and method  
[NASA-CASE-GSC-10087-3] c 07 N72-12080  
Location identification system  
[NASA-CASE-ERC-10324] c 07 N72-25173  
Cosmic dust or other similar outer space particles impact location detector  
[NASA-CASE-GSC-11291-1] c 25 N72-33696  
Collimator of multiple plates with axially aligned identical random arrays of apertures  
[NASA-CASE-MFS-20546-2] c 14 N73-30389  
Measuring probe position recorder  
[NASA-CASE-LAR-10806-1] c 35 N74-32877  
Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c 32 N75-26194  
Impact position detector for outer space particles  
[NASA-CASE-GSC-11829-1] c 35 N75-27331  
Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140  
Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404  
X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898  
Adjustable indicating device for load position  
[NASA-CASE-MFS-28008-1] c 35 N85-20300
- POSITION INDICATORS**  
Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432  
Angular measurement system Patent  
[NASA-CASE-XMF-00447] c 14 N70-33179  
Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c 23 N71-16099  
Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c 14 N71-17585  
Extended area semiconductor radiation detectors and a novel readout arrangement Patent  
[NASA-CASE-XGS-03230] c 14 N71-23401
- Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174  
Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c 35 N75-33367  
Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MS-C-12593-1] c 17 N76-21250  
Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c 44 N80-18552  
Aircraft control position indicator  
[NASA-CASE-LAR-12984-1] c 06 N84-20522  
Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N84-32620  
Improved legislated emergency locating transmitters and emergency position indicating radio beacons  
[NASA-CASE-GSC-12892-1] c 32 N85-20226
- POSITION SENSING**  
Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent  
[NASA-CASE-XGS-07514] c 23 N71-16099
- POSITIONING**  
Instrument support with precise lateral adjustment Patent  
[NASA-CASE-XMF-00480] c 14 N70-39898  
Portable alignment tool Patent  
[NASA-CASE-XMF-01452] c 15 N70-41371  
Optical alignment system Patent  
[NASA-CASE-XNP-02029] c 14 N70-41955  
Null device for hand controller Patent  
[NASA-CASE-XLA-01808] c 15 N71-20740  
Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813  
Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N82-33681
- POSITIONING DEVICES (MACHINERY)**  
Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c 15 N71-23812  
Caterpillar micro positioner  
[NASA-CASE-GSC-10780-1] c 14 N72-16283  
Positioning mechanism  
[NASA-CASE-NPO-10679] c 15 N72-21462  
Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267  
Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304  
Automatic focus control for facsimile cameras  
[NASA-CASE-LAR-11213-1] c 35 N75-15014  
Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c 54 N75-27760  
Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c 37 N77-27400  
Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083  
Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629
- POSITIVE FEEDBACK**  
Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c 09 N71-23015
- POTABLE WATER**  
Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086  
Specialized halogen generator for purification of water Patent  
[NASA-CASE-XLA-08913] c 14 N71-28933  
Potable water dispenser  
[NASA-CASE-MFS-21115-1] c 54 N74-12779  
Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c 54 N74-17853  
Iodine generator for reclaimed water purification  
[NASA-CASE-MS-C-14632-1] c 54 N78-14784  
Degassifying and mixing apparatus for liquids --- potable water for spacecraft  
[NASA-CASE-MS-C-18936-1] c 35 N83-29652
- POTASSIUM SILICATES**  
Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014
- POTENTIOMETERS**  
Angle detector  
[NASA-CASE-ARC-11036-1] c 35 N78-32395
- POTENTIOMETERS (INSTRUMENTS)**  
Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073  
Control device Patent  
[NASA-CASE-XAC-10019] c 15 N71-23809  
Line following servosystem Patent  
[NASA-CASE-XAC-00001] c 15 N71-28952  
Indirect microbial detection  
[NASA-CASE-LAR-12520-1] c 51 N81-28698
- POTTING COMPOUNDS**  
Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c 15 N70-36409  
Flexible, repairable, pottable material for electrical connectors Patent  
[NASA-CASE-XGS-05180] c 18 N71-25881  
Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c 06 N72-21105
- POWDER (PARTICLES)**  
Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358  
Powder fed sheared dispersal particle generator  
[NASA-CASE-LAR-12785-1] c 37 N84-16561
- POWDER METALLURGY**  
Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076  
Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c 17 N71-29137  
Method of making dry electrodes  
[NASA-CASE-FRC-10029-2] c 05 N72-25121  
Method for producing dispersion strengthened alloys by converting metal to a halide, comminuting, reducing the metal halide to the metal and sintering  
[NASA-CASE-LEW-10450-1] c 15 N72-25448  
Method of forming superalloys  
[NASA-CASE-LEW-10805-1] c 15 N73-13465  
Method of heat treating a formed powder product material  
[NASA-CASE-LEW-10805-3] c 26 N74-10521  
Method of forming articles of manufacture from superalloy powders  
[NASA-CASE-LEW-10805-2] c 37 N74-13179  
Cermet composition and method of fabrication --- heat resistant alloys and powders  
[NASA-CASE-NPO-13120-1] c 27 N76-15311  
Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N84-20670  
Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267  
Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550
- POWDERED ALUMINUM**  
Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206
- POWER AMPLIFIERS**  
Ac power amplifier Patent Application  
[NASA-CASE-LAR-10218-1] c 09 N70-34559  
Power supply Patent  
[NASA-CASE-XMS-02159] c 10 N71-22961  
Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331  
Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430  
Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MFS-21616-1] c 33 N75-30429
- POWER CONDITIONING**  
Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254  
Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c 44 N80-14472  
Inelastic tunnel diodes  
[NASA-CASE-LEW-13833-1] c 33 N85-21492
- POWER CONVERTERS**  
Gas-to-hydraulic power converter  
[NASA-CASE-MS-C-18794-1] c 44 N83-14693
- POWER EFFICIENCY**  
Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317  
Excitation and detection circuitry for a flux responsive magnetic head  
[NASA-CASE-XNP-04183] c 09 N69-24329  
Apparatus for increasing ion engine beam density Patent  
[NASA-CASE-XLE-00519] c 28 N70-41576  
Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597  
Remote platform power conserving system  
[NASA-CASE-GSC-11182-1] c 15 N75-13007  
Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136  
Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475  
Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194  
Linearized traveling wave amplifier with hard limiter characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742

**POWER FACTOR CONTROLLERS**

- Triac failure detector  
[NASA-CASE-MFS-25807-1] c 33 N83-34190  
Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424  
Motor power control circuit for ac induction motors  
[NASA-CASE-MFS-25323-1] c 33 N84-22886  
Solar powered actuator with continuously variable auxiliary power control  
[NASA-CASE-MFS-25637-1] c 44 N85-21769  
Power control for ac motor  
[NASA-CASE-MFS-25861-1] c 33 N85-22877

**POWER GAIN**

- Serrodyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c 07 N71-16088  
CRT blanking and brightness control circuit  
[NASA-CASE-KSC-10647-1] c 10 N72-31273

**POWER LIMITERS**

- Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c 10 N72-20221

**POWER LINES**

- Electrical connector for flat cables Patent  
[NASA-CASE-XMF-00324] c 09 N70-34596  
Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c 33 N75-19524  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193  
Shielded conductor cable system  
[NASA-CASE-MS-C-12745-1] c 33 N81-27397  
Electrical power generating system  
[NASA-CASE-MFS-25302-1] c 33 N83-28319  
Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669

**POWER SERIES**

- Computing apparatus Patent  
[NASA-CASE-XGS-04765] c 08 N71-18693  
Phase modulating with odd and even finite power series of a modulating signal  
[NASA-CASE-LAR-11607-1] c 32 N77-14292

**POWER SPECTRA**

- Method and apparatus for high resolution spectral analysis  
[NASA-CASE-NPO-10748] c 08 N72-20177  
Instrument for determining coincidence and elapse time between independent sources of random sequential events  
[NASA-CASE-LAR-12531-1] c 35 N83-29851

**POWER SUPPLIES**

- Tape recorder Patent  
[NASA-CASE-XGS-08259] c 14 N71-23698  
Current dependent filter inductance  
[NASA-CASE-ERC-10139] c 09 N72-17154  
Power supply for carbon dioxide lasers  
[NASA-CASE-GSC-11222-1] c 16 N73-32391  
High voltage distributor  
[NASA-CASE-GSC-11849-1] c 33 N76-16332  
Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931

**POWER SUPPLY CIRCUITS**

- Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c 03 N69-21330  
Power control circuit  
[NASA-CASE-XNP-02713] c 10 N69-39888  
Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c 09 N71-10798  
Heat pipe thermionic diode power system Patent  
[NASA-CASE-XMF-05843] c 03 N71-11055  
Pulsed energy power system Patent  
[NASA-CASE-MS-C-13112] c 03 N71-11057  
Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494  
Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486  
Regulated power supply Patent  
[NASA-CASE-XMS-01991] c 09 N71-21449  
Power supply Patent  
[NASA-CASE-XMS-02159] c 10 N71-22961  
Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271  
Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543  
Drive circuit for minimizing power consumption in inductive load Patent  
[NASA-CASE-NPO-10716] c 09 N71-24892  
Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893  
Voltage dropout sensor Patent  
[NASA-CASE-KSC-10020] c 10 N71-27338

- Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c 14 N71-27407  
High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c 07 N71-33606  
Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225  
A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253  
LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers  
[NASA-CASE-MFS-21698-1] c 33 N74-26732  
Integrable power gyrator --- with Z-matrix design using parallel transistors  
[NASA-CASE-MFS-22342-1] c 33 N75-30428  
The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c 33 N77-10428  
Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913  
Closed Loop solar array-ion thruster system with power control circuitry  
[NASA-CASE-LEW-12780-1] c 20 N79-20179  
Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c 33 N81-12330  
Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395  
Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190  
Arc lamp power supply  
[NASA-CASE-LAR-13202-1] c 33 N86-32626

**POWER TRANSMISSION (LASERS)**

- Long gain length solar pumped box laser  
[NASA-CASE-LAR-13256-1] c 36 N86-29204

**PRECEDENCE**

- Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295

**PRECIPITATION (CHEMISTRY)**

- Production of pure metals  
[NASA-CASE-LEW-10906-1] c 25 N74-30502

**PRECIPITATORS**

- Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104

**PRECISION**

- Precision stepping drive Patent  
[NASA-CASE-MFS-14772] c 15 N71-17692  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148

**PREFLIGHT OPERATIONS**

- Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545

**PRELAUNCH TESTS**

- Parasitic probe antenna Patent  
[NASA-CASE-XKS-09348] c 09 N71-13521  
Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566

**PREPOLYMERS**

- Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25929  
Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514  
Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515  
Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999  
Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358  
Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240  
Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040

**PREPREGS**

- Tackifier for addition polyimides containing monoethylphthalate  
[NASA-CASE-LAR-12642-1] c 27 N81-29229  
Vinyl styrylpyridines and their copolymerization with bismaleimide resins  
[NASA-CASE-ARC-11429-1-CU] c 27 N84-16341

**PRESSURE**

- Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c 35 N76-14430

**PRESSURE CHAMBERS**

- Electric arc driven wind tunnel Patent  
[NASA-CASE-XMF-00411] c 11 N70-36913  
Whole body measurement systems --- for weightlessness simulation  
[NASA-CASE-MS-C-13972-1] c 52 N74-10975  
Accumulator  
[NASA-CASE-MFS-19287-1] c 34 N77-30399

- Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343

**PRESSURE DISTRIBUTION**

- Instrument for use in performing a controlled Valsalva maneuver Patent  
[NASA-CASE-XMS-01815] c 05 N70-41329  
Prevention of pressure build-up in electrochemical cells Patent  
[NASA-CASE-XGS-01419] c 03 N70-41864  
Accumulator  
[NASA-CASE-MFS-19287-1] c 34 N77-30399  
Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MS-C-18134-1] c 37 N81-15363  
Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c 37 N82-24490  
Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932

**PRESSURE DROP**

- Leak detector  
[NASA-CASE-MFS-21761-1] c 35 N75-15931

**PRESSURE EFFECTS**

- System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927  
Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c 31 N75-13111  
Internally supported flexible duct joint --- device for conducting fluids in high pressure systems  
[NASA-CASE-MFS-19193-1] c 37 N75-19686  
Fluid pressure balanced seal  
[NASA-CASE-XGS-01286-1] c 37 N79-33469  
Real time pressure signal system for a rotary engine  
[NASA-CASE-LEW-13622-1] c 07 N84-22559  
Structural pressure sensitive silicone adhesives  
[NASA-CASE-LAR-13270-1] c 27 N84-32532  
Thermoplastics/thermosetting adhesive specimen bonding  
[NASA-CASE-LAR-13066-1] c 27 N86-20564

**PRESSURE GAGES**

- Differential pressure cell Patent  
[NASA-CASE-XAC-00042] c 14 N70-34816  
Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-06061] c 05 N71-23317  
Apparatus for testing a pressure responsive instrument Patent  
[NASA-CASE-XMF-04134] c 14 N71-23755  
Device for measuring pressure Patent  
[NASA-CASE-XAC-04458] c 14 N71-24232  
Ultrahigh vacuum gauge having two collector electrodes  
[NASA-CASE-LAR-02743] c 14 N73-32324  
Gas ion laser construction for electrically isolating the pressure gauge thereof  
[NASA-CASE-MFS-22597] c 36 N78-17366

**PRESSURE GRADIENTS**

- Positive displacement flowmeter Patent  
[NASA-CASE-XMF-02822] c 14 N70-41994  
Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680

**PRESSURE HEADS**

- Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482

**PRESSURE MEASUREMENT**

- Inertia diaphragm pressure transducer Patent  
[NASA-CASE-XAC-02981] c 14 N71-21072  
Linear differential pressure sensor Patent  
[NASA-CASE-XMF-01974] c 14 N71-22752  
Device for measuring pressure Patent  
[NASA-CASE-XAC-04458] c 14 N71-24232  
Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994  
Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327  
Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390  
Apparatus for absolute pressure measurement  
[NASA-CASE-LAR-10000] c 14 N73-30394  
Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c 09 N74-17955  
Indicated mean-effective pressure instrument  
[NASA-CASE-LEW-12661-1] c 35 N79-14345  
High-temperature microphone system --- for measuring pressure fluctuations in gases at high temperature  
[NASA-CASE-LAR-12375-1] c 32 N79-24203

- Static pressure orifice system testing method and apparatus  
[NASA-CASE-LAR-12269-1] c 35 N80-18358
- Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c 02 N80-20224
- Non-invasive method and apparatus for measuring pressure within a pliable vessel  
[NASA-CASE-ARC-11264-2] c 52 N83-29991
- Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639
- PRESSURE REDUCTION**
- Relief valve  
[NASA-CASE-XMS-05894-1] c 15 N69-21924
- Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051
- Depressurization of arc lamps  
[NASA-CASE-NPO-10790-1] c 33 N77-21316
- Method of purifying metallurgical grade silicon employing reduced pressure atmosphere control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229
- Pressure letdown method and device for coal conversion systems  
[NASA-CASE-NPO-15100-1] c 44 N84-14583
- Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095
- Low loss injector for liquid propellant rocket engines  
[NASA-CASE-MFG-25989-1] c 20 N85-20008
- Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800
- PRESSURE REGULATORS**
- Pressure regulating system Patent  
[NASA-CASE-XNP-00450] c 15 N70-38603
- Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922
- High pressure regulator valve Patent  
[NASA-CASE-XNP-00710] c 15 N71-10778
- Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194
- Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203
- Anti-backlash circuit for hydraulic drive system Patent  
[NASA-CASE-XNP-01020] c 03 N71-12260
- High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c 14 N71-18625
- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097
- Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c 05 N73-25125
- Combined pressure regulator and shutoff valve  
[NASA-CASE-NPO-13201-1] c 37 N75-15050
- Pressure modulating valve  
[NASA-CASE-MSC-14905-1] c 37 N77-28487
- Flow compensating pressure regulator  
[NASA-CASE-LEW-12718-1] c 34 N78-25351
- Flow diverter valve and flow diversion method  
[NASA-CASE-HQN-00573-1] c 37 N79-33468
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c 52 N80-14684
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12723-1] c 52 N80-18690
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c 37 N81-17433
- Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c 52 N81-25660
- Fluid driven sump pump  
[NASA-CASE-ARC-11414-1] c 37 N83-20152
- Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c 52 N83-21785
- Vibration isolation and pressure compensation apparatus for sensitive instrumentation  
[NASA-CASE-LAR-12728-1] c 35 N83-32026
- Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873
- PRESSURE SENSORS**
- Pressure variable capacitor  
[NASA-CASE-XNP-09752] c 14 N69-21541
- Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824
- Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c 15 N70-37925
- Dynamic sensor Patent  
[NASA-CASE-XAC-02877] c 14 N70-41681
- Inertia diaphragm pressure transducer Patent  
[NASA-CASE-XAC-02961] c 14 N71-21072
- Linear differential pressure sensor Patent  
[NASA-CASE-XMF-01974] c 14 N71-22752
- Pressure transducer calibrator Patent  
[NASA-CASE-XNP-01660] c 14 N71-23036
- Instrument for measuring the dynamic behavior of liquids Patent  
[NASA-CASE-XLA-05541] c 12 N71-26387
- Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334
- Method of making pressurized panel Patent  
[NASA-CASE-XLA-08916] c 15 N71-29018
- Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327
- Pressure transducer  
[NASA-CASE-NPO-10832] c 14 N72-21405
- Pressure operated electrical switch responsive to a pressure decrease after a pressure increase  
[NASA-CASE-LAR-10137-1] c 09 N72-22204
- Wide range dynamic pressure sensor  
[NASA-CASE-ARC-10263-1] c 14 N72-22438
- Differential pressure control  
[NASA-CASE-MFS-14216] c 14 N73-13418
- Pressurized panel  
[NASA-CASE-XLA-08916-2] c 14 N73-28487
- System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c 35 N74-13132
- Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c 35 N74-32878
- Circuit for detecting initial systole and diastolic notch --- for monitoring arterial pressure  
[NASA-CASE-LEW-11581-1] c 54 N75-13531
- Leak detector  
[NASA-CASE-MFS-21761-1] c 35 N75-15931
- Measurement of gas production of microorganisms --- using pressure sensors  
[NASA-CASE-LAR-11326-1] c 35 N75-33368
- Static pressure probe  
[NASA-CASE-LAR-11552-1] c 35 N76-14429
- Trielectrode capacitive pressure transducer  
[NASA-CASE-ARC-10711-2] c 33 N76-21390
- Catheter tip force transducer for cardiovascular research  
[NASA-CASE-NPO-13643-1] c 52 N76-29896
- Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c 35 N77-14407
- Pressure transducer --- using a monomeric charge transfer complex sensor  
[NASA-CASE-NPO-11150] c 35 N78-17359
- Electronically scanned pressure sensor module with in situ calibration capability  
[NASA-CASE-LAR-12230-1] c 35 N79-14347
- System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300
- Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c 37 N83-36483
- Self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12586-1] c 35 N84-14491
- Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934
- Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568
- Fluidic angular velocity sensor  
[NASA-CASE-NPO-16479-1-CU] c 35 N85-29219
- PRESSURE SUITS**
- Pressure suit tie-down mechanism Patent  
[NASA-CASE-XMS-00784] c 05 N71-12335
- Pressure garment joint Patent  
[NASA-CASE-XMS-09636] c 05 N71-12344
- Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c 05 N71-24623
- Foreshortened convolute section for a pressurized suit Patent  
[NASA-CASE-XMS-09637-1] c 05 N71-24730
- Method of forming a root cord restrained convolute section  
[NASA-CASE-MSC-12398] c 05 N72-20098
- Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119
- Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c 54 N74-32546
- Walking boot assembly  
[NASA-CASE-ARC-11101-1] c 54 N78-17675
- Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987
- Method and apparatus for simulating gravitational forces on a living organism  
[NASA-CASE-MSC-20202-1] c 54 N84-16803
- PRESSURE SWITCHES**
- Reinforcing means for diaphragms Patent  
[NASA-CASE-XNP-01962] c 32 N70-41370
- Calibrating pressure switch  
[NASA-CASE-XMF-04494-1] c 33 N79-33392
- PRESSURE VESSELS**
- Liquid rocket system Patent  
[NASA-CASE-XNP-00610] c 28 N70-36910
- Thin-walled pressure vessel Patent  
[NASA-CASE-XLE-04677] c 15 N71-10577
- Gas regulator Patent  
[NASA-CASE-NPO-10298] c 12 N71-17661
- Controlled glass bead peening Patent  
[NASA-CASE-XLA-07390] c 15 N71-18616
- Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093
- Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c 38 N76-28563
- Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c 35 N78-10428
- Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c 37 N81-17433
- Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784
- Oxygen recombination in individual pressure vessel nickel-hydrogen batteries  
[NASA-CASE-LEW-13822-1] c 44 N86-25874
- Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N86-32570
- PRESSURE WELDING**
- Diffusion welding --- heat treatment of nickel alloys following single step vacuum welding process  
[NASA-CASE-LEW-11388-2] c 37 N74-21055
- PRESSURIZING**
- Restraining mechanism  
[NASA-CASE-MSC-13054] c 54 N78-17677
- PRESTRESSING**
- Prestressed refractory structure Patent  
[NASA-CASE-XNP-02888] c 18 N71-21068
- Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c 24 N81-29163
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482
- Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N86-19613
- PRETREATMENT**
- Pretreatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N69-21471
- Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482
- Pretreatment and reactivation of an oxide-containing catalyst  
[NASA-CASE-LAR-13540-1SB] c 25 N86-32541
- PRIMARY BATTERIES**
- Cathode for primary battery  
[NASA-CASE-NPO-16397-1-CU] c 33 N86-19517
- PRINTED CIRCUITS**
- Electrical feed-through connection for printed circuit boards and printed cable  
[NASA-CASE-XMF-01483] c 14 N69-27431
- Printed cable connector Patent  
[NASA-CASE-XMF-00369] c 09 N70-36494
- Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960
- Electrical spot terminal assembly Patent  
[NASA-CASE-NPO-10034] c 15 N71-17685
- Method of coating circuit paths on printed circuit boards with solder Patent  
[NASA-CASE-XMF-01599] c 09 N71-20705
- Device for handling printed circuit cards Patent  
[NASA-CASE-MFS-20453] c 15 N71-29133
- Polyimide resin-fiberglass cloth laminates for printed circuit boards  
[NASA-CASE-MFS-20408] c 18 N73-12604
- Circuit board package with wedge shaped covers  
[NASA-CASE-MFS-21919-1] c 10 N73-25243
- Device for configuring multiple leads --- method for connecting electric leads to printed circuit board  
[NASA-CASE-MFS-22133-1] c 33 N74-26977
- Connector --- for connecting circuits on different layers of multilayer printed circuit boards  
[NASA-CASE-LAR-11709-1] c 37 N76-27567
- Controlled caging and uncaging mechanism  
[NASA-CASE-GSC-11063-1] c 37 N77-27400
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314
- PRINTING**
- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c 44 N79-11468
- Multicolor printing plate joining  
[NASA-CASE-LEW-13598-1] c 35 N84-22930

- Screen printed interdigitated back contact solar cell  
[NASA-CASE-LEW-13414-1] c 44 N85-20530
- PRINTOUTS**  
Device for handling printed circuit cards Patent  
[NASA-CASE-MFS-20453] c 15 N71-29133
- PRISMS**  
Interferometric rotation sensor  
[NASA-CASE-ARC-10278-1] c 14 N73-25463  
Method and apparatus for splitting a beam of energy --- optical communication  
[NASA-CASE-GSC-12083-1] c 73 N78-32848  
Multiprism collimator  
[NASA-CASE-GSC-12608-1] c 74 N83-10900  
Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978  
Laser Resonator  
[NASA-CASE-GSC-12565-1] c 36 N84-14509
- PROBABILITY THEORY**  
System and method for character recognition  
[NASA-CASE-NPO-11337-1] c 74 N81-19896
- PROBES**  
Method and apparatus for securing to a spacecraft Patent  
[NASA-CASE-MFS-11133] c 31 N71-16222  
Droplet monitoring probe  
[NASA-CASE-NPO-10985] c 14 N73-20478  
System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346  
Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N85-20248  
Heat pipe cooled probe  
[NASA-CASE-LAR-12588-1] c 34 N85-21568
- PROCESS CONTROL (INDUSTRY)**  
Photoelectric detection system --- manufacturing automation  
[NASA-CASE-MFS-23776-1] c 33 N82-28545  
Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-3] c 27 N85-21350  
Chemical approach for controlling nadimide cure temperature and rate with maleimide  
[NASA-CASE-LEW-13770-4] c 27 N85-21351
- PROCESSING**  
Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214
- PRODUCT DEVELOPMENT**  
Technique of duplicating fragile core  
[NASA-CASE-XLA-07829] c 15 N72-16329  
Tube fabricating process  
[NASA-CASE-LAR-10203-1] c 15 N72-16330  
Process for making diamonds  
[NASA-CASE-MFS-20698-2] c 15 N73-19457  
High power laser apparatus and system  
[NASA-CASE-XLE-2529-2] c 36 N75-27364  
Induced junction solar cell and method of fabrication  
[NASA-CASE-NPO-13786-1] c 44 N80-29835  
Process for preparation of large-particle-size monodisperse latexes  
[NASA-CASE-MFS-25000-1] c 25 N81-19242  
Ion-exchange hollow fibers  
[NASA-CASE-NPO-13309-1] c 25 N81-19244  
Precision heat forming of tetrafluoroethylene tubing  
[NASA-CASE-MSC-18430-1] c 37 N82-24491  
Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c 74 N83-29032  
Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854
- PRODUCTION ENGINEERING**  
Indexed keyed connection Patent  
[NASA-CASE-XMS-02532] c 15 N70-41808  
Method and apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917] c 15 N71-15597  
Method of making self lubricating fluoride- metal composite materials Patent  
[NASA-CASE-XLE-08511-2] c 18 N71-16105  
Method of making impurity-type semiconductor electrical contacts Patent  
[NASA-CASE-XMF-01016] c 26 N71-17818  
Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c 15 N71-22713  
Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c 17 N71-23046  
Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293  
Flexible conductive disc electrode Patent  
[NASA-CASE-FRC-10029] c 09 N71-24618  
Star tracking reticles  
[NASA-CASE-GSC-11188-1] c 14 N73-32320  
Process for making sheets with parallel pores of uniform size  
[NASA-CASE-GSC-10984-1] c 37 N75-26371
- Solar cell collector and method for producing same  
[NASA-CASE-LEW-12552-2] c 44 N79-11472  
Multilevel metallization method for fabricating a metal oxide semiconductor device  
[NASA-CASE-MFS-23541-1] c 76 N79-14906  
Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314  
Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550  
Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389  
Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319  
Apparatus for sequentially transporting containers  
[NASA-CASE-MFS-23846-1] c 37 N82-32731  
Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579  
Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888  
Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884
- PROJECTILES**  
Self-obturing, gas operated launcher  
[NASA-CASE-NPO-11013] c 11 N72-22247  
Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c 75 N76-14931
- PROJECTION**  
Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c 35 N78-17357
- PROJECTIVE GEOMETRY**  
Projection system for display of parallax and perspective  
[NASA-CASE-MFS-23194-1] c 35 N78-17357
- PROJECTORS**  
Optical projector system Patent  
[NASA-CASE-XNP-03853] c 23 N71-21882  
System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c 74 N79-20856
- PROPAGATION MODES**  
Dual waveguide mode source having control means for adjusting the relative amplitude of two modes Patent  
[NASA-CASE-XNP-03134] c 07 N71-10676
- PROPAGATION VELOCITY**  
Double reference pulsed phase locked loop (DRP-2L-2)  
[NASA-CASE-LAR-13310-1] c 32 N85-21441
- PROPARGYL GROUPS**  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-1] c 27 N85-20123
- PROPELLANT ACTUATED INSTRUMENTS**  
Pressure limiting propellant actuating system  
[NASA-CASE-MSC-18179-1] c 20 N80-18097
- PROPELLANT ADDITIVES**  
Inhibited solid propellant composition containing beryllium hydride  
[NASA-CASE-NPO-10866-1] c 28 N79-14228
- PROPELLANT BINDERS**  
Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119
- PROPELLANT CASTING**  
Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c 28 N77-10213  
Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-1349] c 20 N77-17143
- PROPELLANT CHEMISTRY**  
Nitramine propellants --- gun propellant burning rate  
[NASA-CASE-NPO-14103-1] c 28 N78-31255
- PROPELLANT COMBUSTION**  
Spherically-shaped rocket motor Patent  
[NASA-CASE-XHQ-01897] c 28 N70-35381  
Control of transverse instability in rocket combustors Patent  
[NASA-CASE-XLE-04603] c 33 N71-21507
- PROPELLANT DECOMPOSITION**  
Decomposition unit Patent  
[NASA-CASE-XMS-00583] c 28 N70-38504
- PROPELLANT GRAINS**  
Propellant grain for rocket motors Patent  
[NASA-CASE-XGS-03556] c 27 N70-35534
- PROPELLANT TANKS**  
Liquid rocket system Patent  
[NASA-CASE-XNP-00610] c 28 N70-36910
- Slosh suppressing device and method Patent  
[NASA-CASE-XMF-00658] c 12 N70-38997
- Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233
- Zero gravity starting means for liquid propellant motors Patent  
[NASA-CASE-XNP-01390] c 28 N70-41275
- Tank construction for space vehicles Patent  
[NASA-CASE-XMF-01899] c 31 N70-41948
- Method and apparatus for detection and location of microleaks Patent  
[NASA-CASE-XMF-02307] c 14 N71-10779
- Method of making a filament-wound container Patent  
[NASA-CASE-XLE-03803-2] c 15 N71-17651
- Slosh alleviator Patent  
[NASA-CASE-XLA-05749] c 15 N71-19569
- Booster tank system Patent  
[NASA-CASE-MSC-12390] c 27 N71-29155
- Space vehicle system  
[NASA-CASE-MSC-12561-1] c 18 N76-17185
- Passive propellant system  
[NASA-CASE-MFS-23642-2] c 20 N78-27176
- Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784
- Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787
- PROPELLANT TRANSFER**  
Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492  
Apparatus for transferring cryogenic liquids Patent  
[NASA-CASE-XLE-00345] c 15 N70-38020  
Method for continuous variation of propellant flow and thrust in propulsive devices Patent  
[NASA-CASE-XLE-00177] c 28 N70-40367  
Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635  
Electrostatic ion rocket engine Patent  
[NASA-CASE-XLE-02066] c 28 N71-15661  
Control of transverse instability in rocket combustors Patent  
[NASA-CASE-XLE-04603] c 33 N71-21507  
Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023  
Filler valve Patent  
[NASA-CASE-XNP-01747] c 15 N71-23024  
Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781  
Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937  
Passive propellant system  
[NASA-CASE-MFS-23642-2] c 20 N78-27176  
Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787
- PROPELLER BLADES**  
Propeller blade loading control Patent  
[NASA-CASE-XAC-00139] c 02 N70-34856
- PROPELLERS**  
Heads up display  
[NASA-CASE-LAR-12630-1] c 06 N84-27733  
Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194
- PROPORTIONAL CONTROL**  
Proportional controller Patent  
[NASA-CASE-XAC-03392] c 03 N70-41954
- PROPULSION SYSTEM CONFIGURATIONS**  
Electro-thermal rocket Patent  
[NASA-CASE-XLE-00267] c 28 N70-33356  
Propellant grain for rocket motors Patent  
[NASA-CASE-XGS-03556] c 27 N70-35534  
Composite powerplant and shroud therefor Patent  
[NASA-CASE-XLA-01043] c 28 N71-10780  
Annular slit colloid thruster Patent  
[NASA-CASE-GSC-10709-1] c 28 N71-25213  
Propellant tank pressurization system Patent  
[NASA-CASE-XNP-00650] c 27 N71-28929  
Apparatus for endoscopic examination --- analysis of the propulsion system configuration and transmitter  
[NASA-CASE-NPO-14092-1] c 52 N80-16725  
Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310  
Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368
- PROPULSION SYSTEM PERFORMANCE**  
Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067
- PROPYLENE**  
Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043
- PROSTHETIC DEVICES**  
Tactile sensing means for prosthetic limbs  
[NASA-CASE-MFS-16570-1] c 05 N73-32013  
Orthotic arm joint --- for use in mechanical arms  
[NASA-CASE-MFS-21611-1] c 54 N75-12616



- Actuator device for artificial leg  
[NASA-CASE-MFS-23225-1] c 52 N77-14735
- Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236
- Rotational joint assembly for the prosthetic leg  
[NASA-CASE-KSC-11004-1] c 54 N77-30749
- Mechanical energy storage device for hip disarticulation  
[NASA-CASE-ARC-10916-1] c 52 N78-10686
- Method of adhering bone to a rigid substrate using a graphite fiber reinforced bone cement  
[NASA-CASE-NPO-13764-1] c 27 N78-17215
- Compact artificial hand  
[NASA-CASE-NPO-13906-1] c 54 N79-24652
- Prosthesis coupling  
[NASA-CASE-KSC-11069-1] c 52 N79-26772
- Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c 52 N81-25660
- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440
- Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744

**PROTECTION**

- Apparatus and method for protecting a photographic device Patent  
[NASA-CASE-NPO-10174] c 14 N71-18465
- Fiber modified polyurethane foam for ballistic protection  
[NASA-CASE-ARC-10714-1] c 27 N76-15310
- Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N86-26296
- PROTECTIVE CLOTHING**
- Process for conditioning tanned sharkskin and articles made therefrom Patent  
[NASA-CASE-XMS-09691-1] c 18 N71-15545
- Biological isolation garment Patent  
[NASA-CASE-MSC-12206-1] c 05 N71-17599
- Garments for controlling the temperature of the body  
[NASA-CASE-XMS-10269] c 05 N71-24147
- Foreshortened convolute section for a pressurized suit Patent  
[NASA-CASE-XMS-09637-1] c 05 N71-24730
- Protective suit having an audio transceiver Patent  
[NASA-CASE-KSC-10164] c 07 N71-33108
- Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679
- Vitra-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MSC-16074-1] c 27 N80-26446
- Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-2] c 54 N84-23113

**PROTECTIVE COATINGS**

- Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895
- Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979
- Process for applying a protective coating for salt bath brazing Patent  
[NASA-CASE-XLE-00046] c 15 N70-33311
- Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c 15 N70-36409
- Thermal control of space vehicles Patent  
[NASA-CASE-XLA-01291] c 33 N70-36617
- Process for preparing sterile solid propellants Patent  
[NASA-CASE-XNP-01749] c 27 N70-41897
- Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014
- Bacteriostatic conformal coating and methods of application Patent  
[NASA-CASE-GSC-10007] c 18 N71-16046
- Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00284] c 15 N71-16075
- Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent  
[NASA-CASE-XLA-00302] c 15 N71-16077
- Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679
- Heat protection apparatus Patent  
[NASA-CASE-XLA-00892] c 33 N71-17897
- Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739
- Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c 18 N71-24183
- Process for reducing secondary electron emission Patent  
[NASA-CASE-XNP-09469] c 24 N71-25555
- Solid state thermal control polymer coating Patent  
[NASA-CASE-XLA-01745] c 33 N71-28903

- Method of coating through-holes Patent  
[NASA-CASE-XMF-05999] c 15 N71-29032
- Potassium silicate zinc coatings  
[NASA-CASE-GSC-10361-1] c 18 N72-23581
- Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037
- Semiconductor surface protection material  
[NASA-CASE-ERC-10339-1] c 18 N73-30532
- Nonflammable coating compositions --- for use in high oxygen environments  
[NASA-CASE-MFS-20486-2] c 27 N74-17283
- Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c 27 N76-16229
- High temperature oxidation resistant cermet compositions  
[NASA-CASE-NPO-13666-1] c 27 N77-13217
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170
- Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096
- Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290
- Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260
- Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c 27 N79-21190
- Fire protection covering for small diameter missiles  
[NASA-CASE-ARC-11104-1] c 15 N79-26100
- Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209
- Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188
- Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MSC-18382-1] c 27 N82-16238
- Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441
- Improved nickel base coating alloy --- oxidation resistant coatings  
[NASA-CASE-LEW-13834-1] c 26 N83-24639
- Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144
- Silicon-slurry/aluminide coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795
- Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177
- Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324
- Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944
- Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13639-2] c 26 N84-27855
- Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13639-1] c 26 N84-33555
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N85-20128
- Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005
- Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283
- Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458
- Diffusion oxygen barrier coating A02/MF A01  
[NASA-CASE-LAR-13474-1-SB] c 26 N86-24814
- Oxidation protecting coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N86-26434
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039
- Apparatus for producing oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-2] c 27 N86-32569
- PROTECTORS**
- Load cell protection device Patent  
[NASA-CASE-XMS-06782] c 32 N71-15974
- Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085
- Protective telescoping shield for solar concentrator  
[NASA-CASE-NPO-16236-1] c 44 N86-27706

**PROTEINS**

- Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves  
[NASA-CASE-GSC-10225-1] c 06 N73-27086

**PROTOCOL (COMPUTERS)**

- Multicomputer communication system  
[NASA-CASE-NPO-15433-1] c 32 N85-21428

**PROTON FLUX DENSITY**

- Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410

**PROXIMITY**

- Focal plane array optical proximity sensor  
[NASA-CASE-NPO-15155-1] c 74 N85-22139

**PSEUDONOISE**

- Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577
- Pseudonoise sequence generators with three tap linear feedback shift registers  
[NASA-CASE-NPO-11406] c 08 N73-12175
- Two carrier communication system with single transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118
- Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c 35 N75-21582
- Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179

**PULLEYS**

- Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878
- Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834

**PULLING**

- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N86-19611
- Universal clamp  
[NASA-CASE-MSC-20549-1] c 37 N86-19612

**PULMONARY CIRCULATION**

- Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922

**PULMONARY FUNCTIONS**

- Instrument for use in performing a controlled Valsalva maneuver Patent  
[NASA-CASE-XMS-01615] c 05 N70-41329

**PULSE AMPLITUDE**

- System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39885
- Analog to digital converter Patent  
[NASA-CASE-XLA-00670] c 08 N71-12501
- Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c 09 N71-12519
- Analog-to-digital converter  
[NASA-CASE-XNP-00477] c 08 N73-28045
- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c 33 N77-26387
- Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309
- Power factor control system for ac induction motors  
[NASA-CASE-MFS-23988-1] c 33 N81-27395
- Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304

**PULSE AMPLITUDE MODULATION**

- Signal ratio system utilizing voltage controlled oscillators Patent  
[NASA-CASE-XMF-04367] c 09 N71-23545
- Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418

**PULSE CODE MODULATION**

- Adaptive compression of communication signals Patent  
[NASA-CASE-XLA-03076] c 07 N71-11266
- Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392
- System for recording and reproducing pulse code modulated data Patent  
[NASA-CASE-XGS-01021] c 08 N71-21042
- Frequency shift keying apparatus Patent  
[NASA-CASE-XGS-01537] c 07 N71-23405
- Data compression system  
[NASA-CASE-NPO-11243] c 07 N72-20154
- Method and apparatus for frequency-division multiplex communications by digital phase shift of carrier  
[NASA-CASE-NPO-11338] c 08 N72-25208
- Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c 07 N73-13149
- Method and apparatus for a single channel digital communications system --- synchronization of received PCM signal by digital correlation with reference signal  
[NASA-CASE-NPO-11302-2] c 32 N74-10132
- Multifunction audio digitizer --- producing direct delta and pulse code modulation  
[NASA-CASE-MSC-13855-1] c 35 N74-17885



- Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12462-1] c 32 N74-20809
- Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12494-1] c 32 N74-20810
- Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c 32 N75-21486
- Compact bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c 33 N76-14371
- Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249
- Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c 32 N77-12239
- Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570
- Method and apparatus for operating on companded PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513
- PULSE COMMUNICATION**
- Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent  
[NASA-CASE-XNP-00911] c 08 N70-41961
- Differential pulse code modulation  
[NASA-CASE-MSC-12506-1] c 32 N77-12239
- Memory-based frame synchronizer --- for digital communication systems  
[NASA-CASE-GSC-12430-1] c 60 N82-16747
- Method and apparatus for operating on companded PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513
- PULSE DURATION**
- Frequency to analog converter Patent  
[NASA-CASE-XNP-07040] c 08 N71-12500
- Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c 09 N71-12519
- Variable pulse width multiplier Patent  
[NASA-CASE-XLA-02850] c 09 N71-20447
- Pulse width inverter Patent  
[NASA-CASE-MFS-10068] c 10 N71-25139
- Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
[NASA-CASE-ARC-10137-1] c 09 N71-28468
- Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c 33 N74-32711
- PULSE DURATION MODULATION**
- Pulse-width modulation multiplier Patent  
[NASA-CASE-XER-09213] c 07 N71-12390
- Variable duration pulse integrator Patent  
[NASA-CASE-XLA-01219] c 10 N71-23084
- Transistor servo system including a unique differential amplifier circuit Patent  
[NASA-CASE-XMF-05195] c 10 N71-24861
- Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418
- Monostable multivibrator with complementary NOR gates Patent  
[NASA-CASE-MSC-13492-1] c 10 N71-28860
- Load current sensor for a series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c 09 N72-25249
- Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c 33 N81-19392
- PULSE FREQUENCY MODULATION**
- Apparatus for measuring current flow Patent  
[NASA-CASE-XGS-02439] c 14 N71-19431
- Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525
- Noninterruptible digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891
- Frequency modulation demodulator threshold extension device Patent  
[NASA-CASE-MSC-12165-1] c 07 N71-33696
- Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c 35 N79-14349
- PULSE GENERATORS**
- High voltage pulse generator Patent  
[NASA-CASE-MSC-12178-1] c 09 N71-13518
- Flipflop interrogator and bi-polar current driver Patent  
[NASA-CASE-XGS-03058] c 10 N71-19547
- Pulse modulator providing fast rise and fall times Patent  
[NASA-CASE-XMS-04919] c 09 N71-23270
- Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311
- Resettable monostable pulse generator Patent  
[NASA-CASE-GSC-11139] c 09 N71-27016
- Pulse generating circuit employing switch means on ends of delay line for alternately charging and discharging same Patent  
[NASA-CASE-XNP-00745] c 10 N71-28960
- Pulse coupling circuit  
[NASA-CASE-LEW-10433-1] c 09 N72-22197
- Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c 38 N74-15395
- Random pulse generator  
[NASA-CASE-MSC-14131-1] c 33 N75-19515
- Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189
- Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N84-32620
- PULSE HEATING**
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484
- PULSE MODULATION**
- Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N84-32620
- PULSE RATE**
- Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137
- Peak holding circuit for extremely narrow pulses  
[NASA-CASE-MSC-14129-1] c 33 N75-18479
- Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969
- PULSED LASERS**
- Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c 16 N71-24832
- Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654
- Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887
- Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418
- Coherently pulsed laser source  
[NASA-CASE-NPO-15111-1] c 36 N82-29589
- Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- Pretreatment and reactivation of an oxide-containing catalyst  
[NASA-CASE-LAR-13540-1SB] c 25 N86-32541
- PULSED RADIATION**
- Cyclically operable optical shutter  
[NASA-CASE-NPO-10758] c 14 N73-14427
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N86-22307
- PULSES**
- High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119
- PUMP SEALS**
- Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-26747
- Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c 37 N74-10474
- PUMPS**
- Piezoelectric pump Patent  
[NASA-CASE-XNP-05429] c 26 N71-21824
- Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023
- Automatic pump Patent  
[NASA-CASE-XNP-04731] c 15 N71-24042
- Hydraulic transformer Patent  
[NASA-CASE-MFS-20830] c 15 N71-30028
- Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465
- Magnetocaloric pump --- for cryogenic fluids  
[NASA-CASE-LEW-11672-1] c 37 N74-27904
- Continuous coal processing method  
[NASA-CASE-NPO-13758-2] c 31 N81-15154
- Gas-to-hydraulic power converter  
[NASA-CASE-MSC-18794-1] c 44 N83-14693
- Fluid driven sump pump  
[NASA-CASE-ARC-11414-1] c 37 N83-20152
- Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078
- Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- Fluidic angular velocity sensor  
[NASA-CASE-NPO-16479-1-CU] c 35 N85-29219
- Remotely operable peristaltic pump  
[NASA-CASE-MFS-28059-1] c 37 N85-29288
- Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N86-20721
- Remotely operable peristaltic pump  
[NASA-CASE-MFS-28059-1] c 37 N86-32738
- PUNCHED CARDS**
- File card marker Patent  
[NASA-CASE-XLA-02705] c 08 N71-15908
- Device for handling printed circuit cards Patent  
[NASA-CASE-MFS-20453] c 15 N71-29133
- PUNCHES**
- Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811
- PURGING**
- Techniques for insulating cryogenic fuel containers Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015
- High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588
- Apparatus for purging systems handling toxic, corrosive, noxious and other fluids Patent  
[NASA-CASE-XMS-01905] c 12 N71-21089
- Purge device for thrust engines Patent  
[NASA-CASE-XMS-04826] c 28 N71-28849
- Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238
- PURIFICATION**
- High pressure helium purifier Patent  
[NASA-CASE-XMF-06888] c 15 N71-24044
- Method and apparatus for distillation of liquids Patent  
[NASA-CASE-XNP-08124] c 15 N71-27184
- Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c 25 N78-27226
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747
- Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- Electromigration process for the purification of molten silicon during crystal growth  
[NASA-CASE-NPO-14831-1] c 76 N82-30105
- Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1CU] c 35 N86-29174
- PURITY**
- Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230
- Low defect, high purity crystalline layers grown by selective deposition  
[NASA-CASE-NPO-15813-1] c 76 N85-30922
- Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N86-21684
- PUSH-PULL AMPLIFIERS**
- Frequency modulated oscillator  
[NASA-CASE-MFS-23181-1] c 33 N77-17351
- Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404
- PUSHING**
- Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N86-19611
- Universal clamp  
[NASA-CASE-MSC-20549-1] c 37 N86-19612
- PYLONS**
- Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373
- PYRIDINES**
- Nuclear alkylated pyridine aldehyde polymers and conductive compositions thereof  
[NASA-CASE-NPO-10557] c 27 N78-17214
- Vinyl styrylpyridines and their copolymerization with bismaleimide resins  
[NASA-CASE-ARC-11429-1-CU] c 27 N84-16341
- Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560
- PYROELECTRICITY**
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-1] c 35 N82-31659
- Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763

## PYROGEN

Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275

## PYROLYSIS

Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261  
Thermal reactor --- liquid silicon production from silane gas  
[NASA-CASE-NPO-14369-1] c 44 N83-10501  
Solar heated oil shale pyrolysis process  
[NASA-CASE-NPO-16392-1] c 25 N86-25428

## PYROLYTIC GRAPHITE

Multislotted film cooled pyrolytic graphite rocket nozzle  
Patent  
[NASA-CASE-XNP-04389] c 28 N71-20942  
Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117  
Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565

## PYROLYTIC MATERIALS

Ablation structures Patent  
[NASA-CASE-XMS-01816] c 33 N71-15623

## PYROMETERS

Ablation sensor  
[NASA-CASE-XLA-01781] c 14 N69-39975

## PYROTECHNICS

Disconnect unit  
[NASA-CASE-NPO-11330] c 33 N73-26958  
Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N85-29287

## PYRRONES (TRADEMARK)

Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358

## Q

## Q SWITCHED LASERS

Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425  
Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c 36 N77-32478  
Laser Resonator  
[NASA-CASE-GSC-12565-1] c 36 N84-14509

## Q VALUES

Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256

## QUADRATIC PROGRAMMING

Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c 33 N78-32338

## QUADRATURES

Automatic quadrature control and measuring system --- using optical coupling circuitry  
[NASA-CASE-MFS-21660-1] c 35 N74-21017

## QUALITATIVE ANALYSIS

Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428  
Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MS-14428-1] c 23 N77-17161  
Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MS-16841-1] c 34 N79-24285

## QUANTITATIVE ANALYSIS

Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199  
Apparatus for detecting the amount of material in a resonant cavity container Patent  
[NASA-CASE-XNP-02500] c 18 N71-27397  
Ultraviolet atomic emission detector  
[NASA-CASE-HQN-10756-1] c 14 N72-25428  
Nondispersive gas analyzing method and apparatus wherein radiation is serially passed through a reference and unknown gas  
[NASA-CASE-ARC-10308-1] c 06 N72-31141  
Analysis of volatile organic compounds --- trace amounts of organic volatiles in gas samples  
[NASA-CASE-MS-14428-1] c 23 N77-17161  
Electrophotolysis oxidation system for measurement of organic concentration in water  
[NASA-CASE-MS-16497-1] c 25 N82-12166  
Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849

## QUANTUM THEORY

III-V photocathode with nitrogen doping for increased quantum efficiency  
[NASA-CASE-NPO-12134-1] c 33 N76-31409

## QUARTZ

Ultraviolet filter  
[NASA-CASE-XNP-02340] c 23 N69-24332

Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260  
Quartz ball valve  
[NASA-CASE-NPO-14473-1] c 37 N80-23654  
Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633

## QUARTZ LAMPS

High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c 09 N70-33312  
Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c 34 N74-23066

## QUINOXALINES

Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040

## R

## RACKS (FRAMES)

Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267  
Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c 18 N74-27397  
Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407  
Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N84-20808  
Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751

## RADAR ANTENNAS

Radar antenna system for acquisition and tracking  
Patent  
[NASA-CASE-XMS-09610] c 07 N71-24625  
Variable beamwidth antenna --- with multiple beam, variable feed system  
[NASA-CASE-GSC-11862-1] c 32 N76-18295  
Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365  
Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308

## RADAR ATTENUATION

FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264

## RADAR BEACONS

Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304

## RADAR DATA

Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c 32 N77-32342

## RADAR ECHOES

Charge-coupled device data processor for an airborne imaging radar system  
[NASA-CASE-NPO-13587-1] c 32 N77-32342

## RADAR EQUIPMENT

Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118  
FM/CW radar system  
[NASA-CASE-MFS-22234-1] c 32 N79-10264

## RADAR IMAGERY

Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c 32 N77-21267  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N79-19195  
Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498  
Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297  
Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968  
Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918  
Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711

## RADAR MEASUREMENT

Thickness measurement system  
[NASA-CASE-MFS-23721-1] c 31 N79-28370

## RADAR RANGE

Radar ranging receiver Patent  
[NASA-CASE-XNP-00748] c 07 N70-36911

## RADAR RECEIVERS

Polarization diversity monopulse tracking receiver  
Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864

## RADAR RECEPTION

Radar ranging receiver Patent  
[NASA-CASE-XNP-00748] c 07 N70-36911

## RADAR REFLECTORS

Inflatable radar reflector unit Patent  
[NASA-CASE-XMS-00893] c 07 N70-40063  
Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c 32 N77-21267

## RADAR TARGETS

Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498  
Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951

## RADAR TRACKING

Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854  
Polarization diversity monopulse tracking receiver  
Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864  
Monopulse tracking system Patent  
[NASA-CASE-XGS-01155] c 10 N71-21483  
Radar calibration sphere  
[NASA-CASE-XLA-11154] c 07 N72-21117  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376

## RADAR TRANSMITTERS

High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119

## RADIAL DISTRIBUTION

Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932

## RADIAL FLOW

Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948  
Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459

## RADIANCE

Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896

## RADIANT COOLING

Direct radiation cooling of the collector of linear beam tubes  
[NASA-CASE-XNP-09227] c 15 N69-24319  
Process for applying black coating to metals Patent  
[NASA-CASE-XLA-06199] c 15 N71-24875  
Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260  
Radiative cooler --- spacecraft radiators  
[NASA-CASE-NPO-15465-1] c 34 N84-22903

## RADIANT FLUX DENSITY

High intensity radiant energy pulse source having means for opening shutter when light flux has reached a desired level  
[NASA-CASE-ARC-10178-1] c 09 N72-17152  
Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287

## RADIANT HEATING

High intensity heat and light unit Patent  
[NASA-CASE-XLA-00141] c 09 N70-33312  
High temperature heat source Patent  
[NASA-CASE-XLE-00490] c 33 N70-34545  
Radiant heater having formed filaments Patent  
[NASA-CASE-XLE-00387] c 33 N70-34812  
Ceramic insulation for radiant heating environments and method of preparing the same Patent  
[NASA-CASE-MFS-14253] c 33 N71-24858  
Portable linear-focused solar thermal energy collecting system  
[NASA-CASE-NPO-13734-1] c 44 N78-10554  
High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c 34 N82-11399

## RADIATION

Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409  
Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447  
Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c 60 N77-32731  
Memory device for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-2] c 60 N78-10709

## RADIATION ABSORPTION

NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c 35 N75-30502

Method for making an aluminum or copper substrate panel for selective absorption of solar energy  
[NASA-CASE-MFS-23518-1] c 44 N79-11469

Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597

**RADIATION COUNTERS**

Particle detection apparatus Patent  
[NASA-CASE-XLA-00135] c 14 N70-33322

Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297

Particle beam measurement apparatus using beam kinetic energy to change the heat sensitive resistance of the detection probe Patent  
[NASA-CASE-XLE-00243] c 14 N70-38602

Baseline stabilization system for ionization detector Patent  
[NASA-CASE-XNP-03128] c 10 N70-41991

Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560

Dosimeter for high levels of absorbed radiation Patent  
[NASA-CASE-XLA-03645] c 14 N71-20430

Coincidence apparatus for detecting particles  
[NASA-CASE-XLA-07813] c 14 N72-17328

Radiation and particle detector and amplifier  
[NASA-CASE-NPO-12128-1] c 14 N73-32317

Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c 35 N74-26949

Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLE-06094] c 33 N78-17293

Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334

Ion mass spectrometer  
[NASA-CASE-NPO-15423-1] c 35 N84-28016

Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292

**RADIATION DAMAGE**

Semiconductor material and method of making same Patent  
[NASA-CASE-XLE-02798] c 26 N71-23654

Recovery of radiation damaged solar cells through thermal annealing  
[NASA-CASE-XGS-04047-2] c 03 N72-11062

Photomultiplier circuit including means for rapidly reducing the sensitivity thereof --- and protection from radiation damage  
[NASA-CASE-ARC-10593-1] c 33 N74-27682

Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N85-20535

Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875

**RADIATION DETECTORS**

Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MSC-12280] c 27 N71-16348

Light detection instrument Patent  
[NASA-CASE-XGS-05534] c 23 N71-16355

Attitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880

Extended area semiconductor radiation detectors and a novel readout arrangement Patent  
[NASA-CASE-XGS-03230] c 14 N71-23401

Nondispersive gas analyzing method and apparatus wherein radiation is serially passed through a reference and unknown gas  
[NASA-CASE-ARC-10308-1] c 06 N72-31141

Radiant source tracker independent of nonconstant irradiance  
[NASA-CASE-NPO-11686] c 14 N73-25462

Radiation and particle detector and amplifier  
[NASA-CASE-NPO-12128-1] c 14 N73-32317

Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c 35 N74-15091

High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088

Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410

Wide angle sun sensor --- consisting of cylinder, insulation and pair of detectors  
[NASA-CASE-NPO-13327-1] c 35 N75-23910

Detector absorptivity measuring method and apparatus  
[NASA-CASE-LAR-10907-1] c 35 N76-29551

Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c 35 N79-33449

X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898

Broadband optical radiation detector  
[US-PATENT-4,262,198] c 74 N83-19597

Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311

Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931

Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N85-30779

Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127

**RADIATION DISTRIBUTION**

Space simulator Patent  
[NASA-CASE-XNP-00459] c 11 N70-38675

**RADIATION DOSAGE**

Dosimeter for high levels of absorbed radiation Patent  
[NASA-CASE-XLA-03645] c 14 N71-20430

Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332

Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311

**RADIATION EFFECTS**

Method of temperature compensating semiconductor strain gages Patent  
[NASA-CASE-XLA-04555-1] c 14 N71-25892

**RADIATION HARDENING**

Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential of field effect device  
[NASA-CASE-GSC-11425-1] c 76 N74-20329

**RADIATION HAZARDS**

Miniature spectrally selective dosimeter  
[NASA-CASE-LAR-12469-1] c 35 N83-21311

**RADIATION MEASUREMENT**

Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447

**RADIATION MEASURING INSTRUMENTS**

Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432

Infrared scanner Patent  
[NASA-CASE-XLA-00120] c 21 N70-33181

Instrument for the quantitative measurement of radiation at multiple wave lengths Patent  
[NASA-CASE-XLE-00011] c 14 N70-41946

Method for improving the signal-to-noise ratio of the Wheatstone bridge type bolometer Patent  
[NASA-CASE-XLA-02810] c 14 N71-25901

Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447

Phototransistor  
[NASA-CASE-MFS-20407] c 09 N73-19235

Method and apparatus for measuring electromagnetic radiation  
[NASA-CASE-LEW-11159-1] c 14 N73-28488

Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c 14 N73-30392

Coaxial anode wire for gas radiation counters  
[NASA-CASE-GSC-11492-1] c 35 N74-26949

Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232

**RADIATION MEDICINE**

Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c 25 N76-27383

**RADIATION PROTECTION**

Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852

Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440

Photomultiplier circuit including means for rapidly reducing the sensitivity thereof --- and protection from radiation damage  
[NASA-CASE-ARC-10593-1] c 33 N74-27682

Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N86-20803

**RADIATION SHIELDING**

Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422

Ionization vacuum gauge with all but the end of the ion collector shielded Patent  
[NASA-CASE-XLA-07424] c 14 N71-18482

Sealed cabinetry Patent  
[NASA-CASE-MSC-12168-1] c 09 N71-18600

Propellant feed isolator Patent  
[NASA-CASE-LEW-10210-1] c 28 N71-26781

Zero gravity shadow shield aligner  
[NASA-CASE-KSC-10622-1] c 31 N72-21893

Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c 34 N74-23066

**RADIATION SOURCES**

Sight switch using an infrared source and sensor Patent  
[NASA-CASE-XMF-03934] c 09 N71-22985

Apparatus for obtaining isotropic irradiation of a specimen  
[NASA-CASE-MFS-20095] c 24 N72-11595

Radiant source tracker independent of nonconstant irradiance  
[NASA-CASE-NPO-11686] c 14 N73-25462

High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c 33 N74-12913

Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318

**RADIATION SPECTRA**

Maksutov spectrograph Patent  
[NASA-CASE-XLA-10402] c 14 N71-29041

**RADIATION THERAPY**

Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875

**RADIATION TOLERANCE**

Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979

Method of making a silicon semiconductor device Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607

Radiation resistant silicon semiconductor devices Patent  
[NASA-CASE-XGS-07801] c 09 N71-12513

Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c 76 N75-25730

Method for analyzing radiation sensitivity of integrated circuits  
[NASA-CASE-NPO-14350-1] c 33 N80-14332

Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N85-20535

Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875

**RADIATIVE HEAT TRANSFER**

Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459

Capillary radiator Patent  
[NASA-CASE-XLE-03307] c 33 N71-14035

Transient heat transfer gauge Patent  
[NASA-CASE-XNP-09802] c 33 N71-15641

Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081

Apparatus and method for heating a material in a transparent ampoule --- crystal growth  
[NASA-CASE-MFS-25436-1] c 27 N83-36220

**RADIATORS**

Self-adjusting multisegment, deployable, natural circulation radiator Patent  
[NASA-CASE-XHQ-03673] c 33 N71-29046

**RADIO ANTENNAS**

Parasitic probe antenna Patent  
[NASA-CASE-XKS-09348] c 09 N71-13521

VHF/UHF parasitic probe antenna Patent  
[NASA-CASE-XKS-09340] c 07 N71-24814

Unfurlable structure including coiled strips thrust launched upon tension release Patent  
[NASA-CASE-HQN-00937] c 07 N71-28979

Highly efficient antenna system using a corrugated horn and scanning hyperbolic reflector  
[NASA-CASE-NPO-13568-1] c 32 N76-21365

**RADIO ASTRONOMY**

Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723

**RADIO BEACONS**

RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c 44 N78-28594

Improved legislated emergency locating transmitters and emergency position indicating radio beacons  
[NASA-CASE-GSC-12892-1] c 32 N85-20226

**RADIO COMMUNICATION**

System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296

Tone calibrated digital radio communication system  
[NASA-CASE-NPO-16414-1-CU] c 32 N85-29121

**RADIO CONTROL**

RF controlled solid state switch  
[NASA-CASE-ARC-10136-1] c 09 N72-22202

**RADIO EQUIPMENT**

System for synchronizing synthesizers of communication systems  
[NASA-CASE-GSC-12148-1] c 32 N79-20296

**RADIO FREQUENCIES**

Helical coaxial resonator RF filter  
[NASA-CASE-XGS-02816] c 07 N69-24323

- Automatic gain control system  
[NASA-CASE-XMS-05307] c 09 N69-24330
- Radio frequency shielded enclosure Patent  
[NASA-CASE-XMF-09422] c 07 N71-19436
- Automatic frequency discriminators and control for a phase-lock loop providing frequency preset capabilities Patent  
[NASA-CASE-XMF-08665] c 10 N71-19467
- Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174
- Radio frequency coaxial high pass filter Patent  
[NASA-CASE-XGS-01418] c 09 N71-23573
- Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266
- Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430
- Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c 17 N73-24569
- RF-source resistance meters  
[NASA-CASE-NPO-11291-1] c 14 N73-30388
- Multichannel logarithmic RF level detector  
[NASA-CASE-LAR-11021-1] c 32 N76-14321
- Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c 35 N77-10492
- Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c 32 N80-18253
- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186
- Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 32 N82-33996
- High stability buffered phase comparator  
[NASA-CASE-GSC-12645-1] c 33 N84-16454
- Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N85-20248
- Tone calibrated digital radio communication system  
[NASA-CASE-NPO-16414-1-CU] c 32 N85-29121
- Linearized traveling wave amplifier with hard limiter characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742
- RADIO FREQUENCY DISCHARGE**
- Electric discharge for treatment of trace contaminants  
[NASA-CASE-ARC-10975-1] c 33 N79-15245
- RADIO FREQUENCY HEATING**
- Gyrotron transmitting tube  
[NASA-CASE-LEW-13429-1] c 33 N83-31952
- RADIO FREQUENCY INTERFERENCE**
- Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c 09 N71-23598
- System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c 32 N75-24982
- Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c 32 N79-11265
- Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341
- Method and apparatus for measuring distance  
[NASA-CASE-MS-C-20912-1] c 32 N86-24879
- RADIO FREQUENCY SHIELDING**
- Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701
- Process for making RF shielded cable connector assemblies and the products formed thereby  
[NASA-CASE-GSC-11215-1] c 09 N73-28083
- RADIO INTERFEROMETERS**
- System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603
- RADIO PROBING**
- Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- RADIO RECEIVERS**
- Multiple input radio receiver Patent  
[NASA-CASE-XLA-00901] c 07 N71-10775
- Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740] c 07 N71-23098
- Radio frequency arraying method for receivers  
[NASA-CASE-NPO-14328-1] c 32 N80-18253
- Interferometric locating system  
[NASA-CASE-NPO-14173-1] c 04 N80-32359
- RADIO RELAY SYSTEMS**
- Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900
- Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c 32 N79-11265
- RADIO SIGNALS**
- Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309
- Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723
- RADIO SOURCES (ASTRONOMY)**
- Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c 32 N79-13214
- RADIO STARS**
- Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174
- RADIO TELEMETRY**
- Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001
- RADIO TELESCOPES**
- Antenna grout replacement system  
[NASA-CASE-NPO-15202-1] c 27 N83-34043
- RADIO TRANSMITTERS**
- Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c 32 N75-26194
- Aircraft-mounted crash-activated transmitter device  
[NASA-CASE-MFS-16609-3] c 03 N76-32140
- Low-frequency radio navigation system  
[NASA-CASE-NPO-15264-1] c 04 N84-27713
- Tone calibrated digital radio communication system  
[NASA-CASE-NPO-16414-1-CU] c 32 N85-29121
- RADIO WAVES**
- Shielded cathode mode bulk effect devices  
[NASA-CASE-ERC-10119] c 26 N72-21701
- RADIOACTIVE ISOTOPES**
- Thermally cascaded thermoelectric generator  
[NASA-CASE-NPO-10753] c 03 N72-26031
- Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876
- Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292
- RADIOBIOLOGY**
- Production of high purity I-123  
[NASA-CASE-LEW-10518-1] c 24 N72-33681
- RADIOGRAPHY**
- Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c 15 N71-18613
- Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MS-C-14276-1] c 52 N77-14737
- Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388
- Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389
- X-ray determination of parts alignment  
[NASA-CASE-MS-C-20418-1] c 74 N86-20126
- RADIOLOGY**
- Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996
- RADIOLYSIS**
- Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c 37 N76-18458
- RADIOMETERS**
- Compensating radiometer  
[NASA-CASE-XLA-04556] c 14 N69-27484
- Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475
- Black body cavity radiometer Patent  
[NASA-CASE-NPO-10810] c 14 N71-27323
- Thermoelectric radiometer utilizing polymer film  
[NASA-CASE-ARC-10138-1] c 14 N72-24477
- Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409
- Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437
- Method and apparatus for measuring solar activity and atmospheric radiation effects  
[NASA-CASE-ERC-10276] c 14 N73-26432
- Steady state thermal radiometers  
[NASA-CASE-MFS-21108-1] c 34 N74-27861
- Method and apparatus for precision control of radiometer  
[NASA-CASE-NPO-15398-1] c 35 N84-22931
- RADIOSONDES**
- Induction powered biological radiosonde  
[NASA-CASE-ARC-11120-1] c 52 N80-18691
- RAIN**
- Precipitation detector Patent  
[NASA-CASE-XLA-02619] c 10 N71-26334
- Environmental fog/rain visual display system for aircraft simulators  
[NASA-CASE-ARC-11158-1] c 09 N82-24212
- RAMJET ENGINES**
- Telescoping-spike supersonic inlet for aircraft engines Patent  
[NASA-CASE-XLE-00005] c 28 N70-39899
- Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168
- RAMPS (STRUCTURES)**
- Automated multi-level vehicle parking system  
[NASA-CASE-NPO-13058-1] c 37 N77-22480
- RANDOM ACCESS MEMORY**
- Memory-based frame synchronizer --- for digital communication systems  
[NASA-CASE-GSC-12430-1] c 60 N82-16747
- Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491
- RANDOM LOADS**
- Fatigue testing device Patent  
[NASA-CASE-XLA-02131] c 32 N70-42003
- RANDOM NOISE**
- Noise limiter Patent  
[NASA-CASE-NPO-10169] c 10 N71-24844
- Digital servo control of random sound test excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c 71 N74-31148
- Random pulse generator  
[NASA-CASE-MS-C-14131-1] c 33 N75-19515
- Pseudo noise code and data transmission method and apparatus  
[NASA-CASE-GSC-12017-1] c 32 N77-30308
- RANGE (EXTREMES)**
- Logarithmic circuit with wide dynamic range  
[NASA-CASE-GSC-12145-1] c 33 N78-32339
- RANGE FINDERS**
- Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c 21 N70-41930
- Digital demodulator-correlator  
[NASA-CASE-NPO-13982-1] c 32 N79-14267
- Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266
- RANGEFINDING**
- Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391
- Ranging system Patent  
[NASA-CASE-NPO-10066] c 09 N71-18598
- Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209
- Code regenerative clean-up loop transponder for a mu-type ranging system  
[NASA-CASE-NPO-11707] c 07 N73-25161
- Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c 19 N74-21015
- Optical distance measuring instrument  
[US-PATENT-APPL-SN-406820] c 74 N83-13982
- RARE EARTH COMPOUNDS**
- Didymium hydrate additive to nickel hydroxide electrodes Patent  
[NASA-CASE-XGS-03505] c 03 N71-10608
- High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455
- RARE GASES**
- Inert gas metallic vapor laser  
[NASA-CASE-NPO-13449-1] c 36 N75-32441
- Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N82-33681
- Fluidized bed desulfurization  
[NASA-CASE-NPO-15924-1] c 25 N85-35253
- RAREFIED GASES**
- Magnetically controlled plasma accelerator Patent  
[NASA-CASE-XLA-00327] c 25 N71-29184
- RATES (PER TIME)**
- Rate data encoder  
[NASA-CASE-LAR-10128-1] c 08 N73-20217
- Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629
- RC CIRCUITS**
- Pulse counting circuit which simultaneously indicates the occurrence of the nth pulse Patent  
[NASA-CASE-XMF-00906] c 09 N70-41655
- RC rate generator for slow speed measurement Patent  
[NASA-CASE-XMF-02966] c 10 N71-24863
- Transient augmentation circuit for pulse amplifiers Patent  
[NASA-CASE-XNP-01068] c 10 N71-28739
- Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256
- RC networks and amplifiers employing the same  
[NASA-CASE-XAC-05462-2] c 10 N72-17171
- Active RC networks  
[NASA-CASE-ARC-10020] c 10 N72-17172

- Multiloop RC active filter apparatus having low parameter sensitivity with low amplifier gain  
[NASA-CASE-ARC-10192] c 09 N72-21245
- Temperature control system with a pulse width modulated bridge  
[NASA-CASE-NPO-11304] c 14 N73-26430
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520
- REACTION CONTROL**  
Voice operated controller Patent  
[NASA-CASE-XLA-04063] c 31 N71-33160
- REACTION KINETICS**  
Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174
- REACTION PRODUCTS**  
Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N86-25477
- REACTION TIME**  
Pseudonoise code tracking loop  
[NASA-CASE-MSC-18035-1] c 32 N81-15179
- REACTION WHEELS**  
Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c 14 N71-21082
- Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324
- Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N85-20299
- REACTIVITY**  
Gaseous control system for nuclear reactors  
[NASA-CASE-XLE-04599] c 22 N72-20597
- REACTOR CORES**  
Uninsulated in-core thermionic diode  
[NASA-CASE-NPO-10542] c 09 N72-27228
- REACTOR DESIGN**  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920
- Thermal reactor --- liquid silicon production from silane gas  
[NASA-CASE-NPO-14369-1] c 44 N83-10501
- REACTOR MATERIALS**  
Zirconium modified nickel-copper alloy  
[NASA-CASE-LEW-12245-1] c 26 N77-20201
- REACTOR PHYSICS**  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920
- READ-ONLY MEMORY DEVICES**  
Nanosequencer digital logic controller  
[NASA-CASE-NPO-16116-1] c 60 N84-25306
- Method and apparatus for operating on compressed PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513
- READERS**  
Braille reading system  
[NASA-CASE-LAR-13306-1] c 82 N86-25292
- READOUT**  
Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c 14 N71-24864
- Plural position switch status and operativeness checker Patent  
[NASA-CASE-XLA-08799] c 10 N71-27272
- Magneto-optic detection system with noise cancellation  
[NASA-CASE-NPO-11954-1] c 35 N78-29421
- REAL TIME OPERATION**  
Respiratory analysis system and method  
[NASA-CASE-MSC-13436-1] c 05 N73-32015
- Real time moving scene holographic camera system  
[NASA-CASE-MFS-21087-1] c 35 N74-17153
- Real time, large volume, moving scene holographic camera system  
[NASA-CASE-MFS-22537-1] c 35 N75-27328
- Carbon monoxide monitor --- using real time operation  
[NASA-CASE-MFS-22060-1] c 35 N75-29380
- Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c 32 N76-31372
- Real time reflectometer --- measurement of specular reflectance  
[NASA-CASE-MFS-23118-1] c 35 N77-31465
- Contour detector and data acquisition system for the left ventricular outline  
[NASA-CASE-ARC-10985-1] c 52 N79-10724
- Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c 32 N79-14268
- System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603
- X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898
- Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297
- Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651
- Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21346
- REBREATHING**  
Portable breathing system --- a breathing apparatus using a rebreathing system of heat exchangers for carbon dioxide removal  
[NASA-CASE-MSC-16182-1] c 54 N80-10799
- RECEIVERS**  
System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MSC-12259-1] c 07 N70-12616
- Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012
- Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113
- Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523
- Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249
- Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346
- Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c 35 N81-19427
- Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952
- Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723
- High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1CU] c 04 N86-27270
- RECIPROCATING**  
Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- RECOMBINATION REACTIONS**  
Oxygen recombination in individual pressure vessel nickel-hydrogen batteries  
[NASA-CASE-LEW-13822-1] c 44 N86-25874
- RECONSTRUCTION**  
Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c 18 N71-26154
- RECORDING HEADS**  
Electromagnetic transducer recording head having a laminated core section and tapered gap  
[NASA-CASE-NPO-10711-1] c 35 N77-21392
- RECORDING INSTRUMENTS**  
Automatic force measuring system Patent  
[NASA-CASE-XLA-02605] c 14 N71-10773
- Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent  
[NASA-CASE-XMS-09061] c 05 N71-23317
- Helical recorder arrangement for multiple channel recording on both sides of the tape  
[NASA-CASE-GSC-10614-1] c 09 N72-11224
- Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c 36 N74-13205
- Holography utilizing surface plasmon resonances  
[NASA-CASE-MFS-22040-1] c 35 N74-26946
- Measuring probe position recorder  
[NASA-CASE-LAR-10806-1] c 35 N74-32877
- RECOVERABILITY**  
Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c 35 N74-16135
- RECOVERABLE LAUNCH VEHICLES**  
Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176
- Orbiter/launch system  
[NASA-CASE-LAR-12250-1] c 14 N81-26161
- RECOVERABLE SPACECRAFT**  
Space capsule ejection assembly Patent  
[NASA-CASE-XMF-03169] c 31 N71-15675
- RECOVERY PARACHUTES**  
Vehicle parachute and equipment jettison system Patent  
[NASA-CASE-XLA-00195] c 02 N70-38009
- Vortex breach high pressure gas generator  
[NASA-CASE-LAR-10549-1] c 31 N73-13898
- RECTANGULAR PANELS**  
Stacked solar cell arrays  
[NASA-CASE-NPO-11771] c 03 N73-20040
- Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c 24 N78-10214
- RECTIFIERS**  
Thin window, drifted silicon, charged particle detector  
[NASA-CASE-XLE-10529] c 14 N69-23191
- Power control circuit  
[NASA-CASE-XNP-02713] c 10 N89-39888
- Precision rectifier with FET switching means Patent  
[NASA-CASE-ARC-10101-1] c 09 N71-33109
- SCR lamp driver  
[NASA-CASE-GSC-10221-1] c 09 N72-23171
- A dc to ac to dc converter having transistor synchronous rectifiers  
[NASA-CASE-GSC-11126-1] c 09 N72-25253
- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393
- RECTUM**  
Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875
- REDOX CELLS**  
Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524
- Zirconium carbide as an electrocatalyst for the chromous-chromic redox couple  
[NASA-CASE-LEW-13246-1] c 44 N83-27344
- Chromium electrodes for REDOX cells  
[NASA-CASE-LEW-13653-1] c 44 N84-28205
- Negative electrode catalyst for the iron chromium redox energy storage system  
[NASA-CASE-LEW-14028-1] c 44 N86-19721
- Method and apparatus for rebalancing a REDOX flow cell system  
[NASA-CASE-LEW-14127-1] c 33 N86-20680
- REDUCED GRAVITY**  
Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988
- Mass measuring system Patent  
[NASA-CASE-XMS-03371] c 05 N70-42000
- Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c 11 N71-18028
- Restraint system for ergometer  
[NASA-CASE-MFS-21046-1] c 14 N73-27377
- Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442
- Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283
- REDUCTION (CHEMISTRY)**  
Production of metal powders  
[NASA-CASE-XLE-06461] c 17 N72-22530
- Process for making anhydrous metal halides  
[NASA-CASE-LEW-11860-1] c 37 N78-18458
- Curable liquid hydrocarbon prepolymers containing hydroxyl groups and process for producing same  
[NASA-CASE-NPO-13137-1] c 27 N80-32514
- Hydrodesulfurization of chlorinated coal  
[NASA-CASE-NPO-15304-1] c 25 N83-31743
- REDUNDANCY**  
Reconfiguring redundancy management  
[NASA-CASE-MSC-18496-1] c 60 N82-29013
- REDUNDANT COMPONENTS**  
Redundant memory organization Patent  
[NASA-CASE-GSC-10564] c 10 N71-29135
- Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101
- Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c 37 N80-32716
- Redundant operation of counter modules  
[NASA-CASE-NPO-14162-1] c 60 N81-15706
- REELS**  
Method and apparatus for measuring web material wound on a reel  
[NASA-CASE-GSC-11902-1] c 38 N77-17495
- Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669
- REENTRY COMMUNICATION**  
Electrostatic plasma modulator for space vehicle re-entry communication Patent  
[NASA-CASE-XLA-01400] c 07 N70-41331
- Means for communicating through a layer of ionized gases Patent  
[NASA-CASE-XLA-01127] c 07 N70-41372
- Reentry communication by material addition Patent  
[NASA-CASE-XLA-01552] c 07 N71-11284
- REENTRY SHIELDING**  
Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075
- Method and apparatus for making a heat insulating and ablative structure Patent  
[NASA-CASE-XMS-02009] c 33 N71-20834
- Stand-off type ablative heat shield  
[NASA-CASE-MSC-12143-1] c 33 N72-17947
- Protected isotope heat source --- for atmospheric reentry protection and heat transmission to spacecraft  
[NASA-CASE-LEW-11227-1] c 73 N75-30876
- Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c 24 N79-24062

Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339  
Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520

**REENTRY TRAJECTORIES**  
Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41631

**REENTRY VEHICLES**  
Reentry vehicle leading edge Patent  
[NASA-CASE-XLA-00165] c 31 N70-33242  
Variable-geometry winged reentry vehicle Patent  
[NASA-CASE-XLA-00241] c 31 N70-37986  
Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699  
Ablation sensor Patent  
[NASA-CASE-XLA-01791] c 14 N71-22991  
Ring wing tension vehicle Patent  
[NASA-CASE-XLA-04901] c 31 N71-24315  
Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257  
Vortex breach high pressure gas generator  
[NASA-CASE-LAR-10549-1] c 31 N73-13898  
Three-component ceramic coating for silica insulation  
[NASA-CASE-MS-C-14270-2] c 27 N76-23426

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Automatic frequency control loop including synchronous switching circuits  
[NASA-CASE-KSC-10393] c 09 N72-21247  
Magnetic heading reference  
[NASA-CASE-LAR-11387-2] c 04 N77-19056

**REFINING**  
Helium refining by superfluidity Patent  
[NASA-CASE-XNP-00733] c 06 N70-34946

**REFLECTANCE**  
Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16385  
Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587  
Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868  
Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766  
Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N85-20868  
Diffusely reflecting paints including polytetrafluoroethylene and method of manufacture  
[NASA-CASE-GSC-12883-1] c 27 N85-29044  
Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732

**REFLECTED WAVES**  
Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662  
Clear air turbulence detector  
[NASA-CASE-MFS-21244-1] c 36 N75-15028  
Reflected-wave maser --- low noise amplifier  
[NASA-CASE-NPO-13490-1] c 36 N76-31512

**REFLECTING TELESCOPES**  
Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c 89 N79-10969  
Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732

**REFLECTION**  
Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MFS-13532] c 18 N72-17532  
Method and apparatus for compensating reflection losses in a path length modulated absorption-absorption trace gas detector --- for determining density of gas  
[NASA-CASE-ARC-10631-1] c 74 N76-20958  
Ranging system which compares an object reflected component of a light beam to a reference component of the light beam  
[NASA-CASE-NPO-15865-1] c 74 N85-34629

**REFLECTOMETERS**  
Ellipsoidal mirror reflectometer including means for averaging the radiation reflected from the sample Patent  
[NASA-CASE-XGS-05291] c 23 N71-16341  
Real time reflectometer --- measurement of specular reflectance  
[NASA-CASE-MFS-23118-1] c 35 N77-31465  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443  
Visible and infrared polarization ratio spectrophotometer  
[NASA-CASE-LAR-12285-1] c 35 N80-28687

**REFLECTOR ANTENNAS**  
Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355

**REFLECTORS**  
Reflector space satellite Patent  
[NASA-CASE-XLA-00138] c 31 N70-37981

Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c 31 N71-16102  
Spectroscope equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206  
Conical reflector antenna  
[NASA-CASE-NPO-10303] c 07 N72-22127  
Target acquisition antenna  
[NASA-CASE-GSC-10064-1] c 10 N72-22235  
Multi-purpose antenna employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c 07 N72-25174  
Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130  
Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526  
Solar cell having improved back surface reflector  
[NASA-CASE-LEW-13620-1] c 44 N83-13579  
Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846  
Optical system with reflective baffles  
[NASA-CASE-ARC-11502-1] c 74 N86-20125  
Welding torch arc light reflector  
[NASA-CASE-MFS-29134-1] c 74 N86-20130  
Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276  
Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138

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The 2 deg/90 deg laboratory scattering photometer --- particulate refractivity in hydrosols  
[NASA-CASE-GSC-12088-1] c 74 N78-13874  
Chromatically corrected virtual image visual display --- reducing eye strain in flight simulators  
[NASA-CASE-LAR-12251-1] c 74 N80-27185  
Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680  
Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1SB] c 52 N85-20639

**REFRACTORY COATINGS**  
Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415  
Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371  
Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520  
Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266

**REFRACTORY MATERIALS**  
High temperature testing apparatus Patent  
[NASA-CASE-XLE-00335] c 14 N70-35368  
Prestressed refractory structure Patent  
[NASA-CASE-XNP-02888] c 18 N71-21068  
Method of manufacturing semiconductor devices using refractory dielectrics  
[NASA-CASE-XER-08476-1] c 26 N72-17820  
High temperature furnace for melting materials in space  
[NASA-CASE-MFS-20710] c 11 N72-23215  
High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302  
High temperature resistant cermet and ceramic compositions  
[NASA-CASE-NPO-13690-2] c 27 N79-14213  
Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c 24 N79-24062  
Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307  
Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209  
Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339  
Attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MS-C-18741-1] c 27 N82-29456  
Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MS-C-18737-1] c 24 N83-13171  
Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MS-C-18736-1] c 24 N83-13172  
High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MS-C-18832-1] c 27 N83-18908

Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MS-C-18791-1] c 37 N83-36482  
High temperature resistant polyimide from tetra ester, diamine, diester and N-arylnadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457

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[NASA-CASE-XLE-00387] c 33 N70-34812  
Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468  
Multilayer porous ionizer Patent  
[NASA-CASE-XNP-04338] c 17 N71-23046  
Brazing alloy Patent  
[NASA-CASE-XNP-03063] c 17 N71-23365  
Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c 33 N71-24145  
Method of producing refractory composites containing tantalum carbide, hafnium carbide, and hafnium boride Patent  
[NASA-CASE-XLE-03940] c 18 N71-26153  
Silicide coatings for refractory metals Patent  
[NASA-CASE-XLE-10910] c 18 N71-29040  
Refractory metal base alloy composites  
[NASA-CASE-XLE-03940-2] c 17 N72-28536  
Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c 27 N76-16229  
Method of making an apertured casting --- using duplicate mold  
[NASA-CASE-LEW-11169-1] c 37 N76-23570  
Absorbable-susceptor joining of ceramic surfaces  
[NASA-CASE-NPO-15640-1] c 27 N84-22748

**REFRIGERATING**  
Helium refrigerator and method for decontaminating the refrigerator  
[NASA-CASE-NPO-10634] c 23 N72-25619  
Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625

**REFRIGERATING MACHINERY**  
Refrigeration apparatus  
[NASA-CASE-NPO-10309] c 15 N69-23190  
Refrigeration apparatus Patent  
[NASA-CASE-XNP-08877] c 15 N71-23025  
Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725  
Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c 37 N76-29590  
Cycling Joule Thomson refrigerator  
[NASA-CASE-NPO-15251-1] c 31 N83-31897  
Vibration isolation and pressure compensation apparatus for sensitive instrumentation  
[NASA-CASE-LAR-12728-1] c 35 N83-32026  
Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404  
Oxygen chemisorption cryogenic refrigerator  
[NASA-CASE-NPO-16734-1CU] c 31 N86-27467

**REFRIGERATORS**  
Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c 15 N71-15906  
Helium refrigerator  
[NASA-CASE-NPO-13435-1] c 31 N76-14284  
Thermal compensator for closed-cycle helium refrigerator --- assuring constant temperature for an infrared laser diode  
[NASA-CASE-GSC-12168-1] c 31 N79-17029  
Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082  
Ten degree Kelvin hydride refrigerator  
[NASA-CASE-NPO-16393-1CU] c 31 N85-29084

**REGENERATION (ENGINEERING)**  
Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-XNP-02654] c 10 N70-42032  
Regenerative braking system Patent  
[NASA-CASE-XMF-01096] c 10 N71-16030  
Free-piston regenerative hot gas hydraulic engine  
[NASA-CASE-LEW-12274-1] c 37 N80-31790

**REGENERATION (PHYSIOLOGY)**  
Implantable electrical device  
[NASA-CASE-GSC-12560-1] c 52 N82-29863

**REGENERATIVE COOLING**  
Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411  
Method of making a regeneratively cooled combustion chamber Patent  
[NASA-CASE-XLE-00150] c 28 N70-41818  
Small rocket engine Patent  
[NASA-CASE-XLE-00685] c 28 N70-41992  
Combustion chamber Patent  
[NASA-CASE-XLE-04857] c 28 N71-23968



- Method of making apparatus for sensing temperature  
[NASA-CASE-XLE-05230-2] c 14 N73-13417
- REGENERATIVE FUEL CELLS**  
Electrolytically regenerative hydrogen-oxygen fuel cell  
Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052
- REGENERATORS**  
Code regenerative clean-up loop transponder for a mu-type ranging system  
[NASA-CASE-NPO-11707] c 07 N73-25161  
Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625
- REGISTERS (COMPUTERS)**  
Variable digital processor including a register for shifting and rotating bits in either direction Patent  
[NASA-CASE-GSC-10186] c 08 N71-33110  
Priority interrupt system --- comprised of four registers  
[NASA-CASE-NPO-13067-1] c 60 N76-18800
- REINFORCED PLASTICS**  
Tube fabricating process  
[NASA-CASE-LAR-10203-1] c 15 N72-16330  
Reinforced structural plastics  
[NASA-CASE-LEW-10199-1] c 27 N74-23125
- REINFORCEMENT (STRUCTURES)**  
Reinforcing means for diaphragms Patent  
[NASA-CASE-XNP-01962] c 32 N70-41370
- REINFORCING FIBERS**  
Reinforced metallic composites Patent  
[NASA-CASE-XLE-02428] c 17 N70-33288  
Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c 17 N70-38198  
Method for producing fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-03925] c 18 N71-22894  
Thermal protection ablation spray system Patent  
[NASA-CASE-XLA-04251] c 18 N71-26100  
Method of preparing graphite reinforced aluminum composite  
[NASA-CASE-MFS-21077-1] c 24 N75-28135  
Crystalline polyimides --- reinforcing fibers for high temperature composites and adhesives as well as flame retardation  
[NASA-CASE-LAR-12099-1] c 27 N80-16158  
Composition and method for making polyimide resin-reinforced fabric  
[NASA-CASE-LEW-12933-1] c 27 N81-19296  
High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers  
[NASA-CASE-HQN-10595-1] c 27 N82-29455  
Method of carbonizing polyacrylonitrile fibers  
[NASA-CASE-ARC-11261-1] c 24 N83-25789  
Fluoroether modified epoxy composites  
[NASA-CASE-ARC-11418-1] c 24 N84-11213  
Lightweight piston  
[NASA-CASE-LAR-13150-1] c 24 N85-28975
- RELAXATION OSCILLATORS**  
Voltage to frequency converter Patent  
[NASA-CASE-GSC-10022-1] c 10 N71-25882
- RELAY SATELLITES**  
Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c 07 N71-24621  
Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c 32 N80-20448
- RELEASING**  
Despin weight release Patent  
[NASA-CASE-XLA-00679] c 15 N70-38601  
Quick attach and release fluid coupling assembly Patent  
[NASA-CASE-XKS-01985] c 15 N71-10782  
Redundant actuating mechanism Patent  
[NASA-CASE-XGS-08718] c 15 N71-24600  
Quick release hook tape Patent  
[NASA-CASE-XMS-10660-1] c 15 N71-25975  
Delayed simultaneous release mechanism  
[NASA-CASE-GSC-10814-1] c 03 N73-20039  
Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N85-29287  
Slide release mechanism --- for space shuttle orbiter/external tank connection device  
[NASA-CASE-MSC-20080-1] c 37 N85-30334  
Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N86-19613
- RELIABILITY ANALYSIS**  
Program for computer aided reliability estimation  
[NASA-CASE-NPO-13086-1] c 15 N73-12495
- RELIABILITY ENGINEERING**  
Method of improving the reliability of a rolling element system Patent  
[NASA-CASE-XLE-02999] c 15 N71-16052  
Inspection gage for boss Patent  
[NASA-CASE-XMF-04966] c 14 N71-17658  
Valving device for automatic refilling in cryogenic liquid systems  
[NASA-CASE-NPO-11177] c 15 N72-17453
- Electrical connector  
[NASA-CASE-NPO-10694] c 09 N72-20200  
Inherent redundancy electric heater  
[NASA-CASE-MFS-21462-1] c 33 N74-14935  
Hollow rolling element bearings  
[NASA-CASE-LEW-11087-3] c 37 N74-21064  
Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c 60 N82-29013  
Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c 35 N84-33769  
Lightweight piston  
[NASA-CASE-LAR-13150-1] c 24 N85-28975
- RELIEF MAPS**  
Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711
- RELIEF VALVES**  
Relief valve  
[NASA-CASE-XMS-05894-1] c 15 N69-21924  
Zero gravity separator Patent  
[NASA-CASE-XLE-00596] c 15 N71-15968  
Redundant hydraulic control system for actuators  
[NASA-CASE-MFS-20944] c 15 N73-13468  
Prosthetic urinary sphincter  
[NASA-CASE-MFS-23717-1] c 52 N81-25660  
Ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-1] c 52 N83-21785
- REMOTE CONTROL**  
Electromagnetic mirror drive system  
[NASA-CASE-XLA-03724] c 14 N69-27461  
Tubular coupling having frangible connecting means  
[NASA-CASE-XLA-02854] c 15 N69-27490  
Bimetallic power controlled actuator  
[NASA-CASE-XNP-09778] c 09 N69-39929  
Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492  
Umbilical disconnect Patent  
[NASA-CASE-XLA-00711] c 03 N71-12258  
Remote controlled tubular disconnect Patent  
[NASA-CASE-XLA-01396] c 03 N71-12259  
Three-axis finger tip controller for switches Patent  
[NASA-CASE-XAC-02405] c 09 N71-16089  
Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900  
Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125  
Solid state remote circuit selector switch  
[NASA-CASE-LEW-10387] c 09 N72-22201  
Laser communication system for controlling several functions at a location remote to the laser  
[NASA-CASE-LAR-10311-1] c 16 N73-16536  
Cooperative multiaxis sensor for teleoperation of article manipulating apparatus  
[NASA-CASE-NPO-13386-1] c 54 N75-27758  
Remotely operable articulated manipulator  
[NASA-CASE-MFS-22707-1] c 37 N76-15457  
Remote manipulator system  
[NASA-CASE-MFS-22022-1] c 37 N76-15460  
Remote lightning monitor system  
[NASA-CASE-KSC-11031-1] c 33 N79-11315  
Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c 74 N79-13855  
Terminal guidance sensor system  
[NASA-CASE-NPO-14521-1] c 54 N79-20746  
Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519  
Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117  
Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264  
Remotely operable peristaltic pump  
[NASA-CASE-MFS-28059-1] c 37 N85-29288  
Apparatus and method of capturing an orbiting satellite  
[NASA-CASE-MSC-20979-1] c 37 N86-19614  
Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N86-20804  
Remotely controllable mixing system  
[NASA-CASE-MFS-28153-1] c 31 N86-32589  
Remotely operable peristaltic pump  
[NASA-CASE-MFS-28059-1] c 37 N86-32738
- REMOTE HANDLING**  
Remote control manipulator for zero gravity environment  
[NASA-CASE-MFS-14405] c 15 N72-28495  
Apparatus for remote handling of materials --- mixing or analyzing dangerous chemicals  
[NASA-CASE-LAR-10634-1] c 37 N74-18123
- Anthropomorphic master/slave manipulator system  
[NASA-CASE-ARC-10756-1] c 54 N77-32721  
Controller arm for a remotely related slave arm  
[NASA-CASE-ARC-11052-1] c 37 N79-28551  
Apparatus for sequentially transporting containers  
[NASA-CASE-MFS-23846-1] c 37 N82-32731  
Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286
- REMOTE MANIPULATOR SYSTEM**  
Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c 37 N80-14398  
Apparatus and method of capturing an orbiting satellite  
[NASA-CASE-MSC-20979-1] c 37 N86-19614  
Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N86-21147
- REMOTE SENSING**  
Method and apparatus for calibrating the ionosphere and application to surveillance of geophysical events  
[NASA-CASE-NPO-15430-1] c 46 N85-21846
- REMOTE SENSORS**  
Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMF-14032] c 20 N71-16340  
Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
[NASA-CASE-XLE-00787] c 14 N71-21090  
Flow angle sensor and read out system Patent  
[NASA-CASE-XLE-04503] c 14 N71-24864  
Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326  
Clear air turbulence detector  
[NASA-CASE-ERC-10081] c 14 N72-28437  
Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25160  
Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c 44 N74-19870  
Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c 33 N75-19521  
Wind sensor  
[NASA-CASE-NPO-13462-1] c 35 N76-24524  
Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493  
Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753  
Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367  
Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529  
Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c 35 N78-27384  
Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498  
Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639
- REMOTELY PILOTED VEHICLES**  
Rotating launch device for a remotely piloted aircraft  
[NASA-CASE-ARC-10979-1] c 09 N77-19076
- REMOVAL**  
Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c 15 N70-36901  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119  
Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781
- REPEATERS**  
Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773
- REPLACING**  
Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent  
[NASA-CASE-NPO-10625] c 09 N71-26182
- RESCUE OPERATIONS**  
Backpack carrier Patent  
[NASA-CASE-LAR-10056] c 05 N71-12351  
Rescue litter flotation assembly Patent  
[NASA-CASE-XMS-04170] c 05 N71-22748  
Method of locating persons in distress --- by using radar imagery from radar reflectors  
[NASA-CASE-LAR-11390-1] c 32 N77-21267  
Apparatus and method of capturing an orbiting satellite  
[NASA-CASE-MSC-20979-1] c 37 N86-19614



## RESEARCH AIRCRAFT

Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295

## RESEARCH AND DEVELOPMENT

Tube fabricating process  
[NASA-CASE-LAR-10203-1] c 15 N72-16330

## RESEARCH VEHICLES

Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966

Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895

## RESIDUAL STRESS

Miniature stress transducer Patent  
[NASA-CASE-XNP-02983] c 14 N71-21091

Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120

## RESILIENCE

Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161

## RESIN BONDING

Method and apparatus for bonding a plastics sleeve onto a metallic body Patent  
[NASA-CASE-XLA-01262] c 15 N71-21404

Covered silicon solar cells and method of manufacture --- with polymeric films  
[NASA-CASE-LEW-11065-2] c 44 N76-14600

Method of manufacture of bonded fiber flywheel --- fiberglass-epoxy  
[NASA-CASE-MFS-23674-1] c 24 N81-29163

## RESIN MATRIX COMPOSITES

Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272

Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900

Method of tracing contour patterns for use in making gradual contour resin matrix composites  
[NASA-CASE-ARC-11246-1] c 31 N83-34073

High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1-SB] c 24 N85-30033

Process for preparing phthalocyanine polymers  
[NASA-CASE-ARC-11511-2] c 27 N86-19461

Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560

High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1-SB] c 24 N86-21590

Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451

## RESINS

Modified polyurethane foams for fuel-fire Patent  
[NASA-CASE-ARC-10098-1] c 06 N71-24739

Bonding or repairing process  
[NASA-CASE-MSC-12357] c 15 N73-12489

Semiconductor surface protection material  
[NASA-CASE-ERC-10339-1] c 18 N73-30532

Composite lamination method  
[NASA-CASE-LAR-12019-1] c 24 N78-17150

Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11368-1] c 27 N83-31854

High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1-SB] c 24 N85-30033

## RESISTANCE

Method of making a perspiration resistant biopotential electrode  
[NASA-CASE-MSC-90153-2] c 05 N72-25120

Variable resistance constant tension and lubrication device --- using oil-saturated leather wiper  
[NASA-CASE-KSC-10723-1] c 37 N75-13265

Acoustic ground impedance meter  
[NASA-CASE-LAR-12995-1] c 35 N84-22933

## RESISTANCE HEATING

Electrothermal rockets having improved heat exchangers Patent  
[NASA-CASE-XLE-01783] c 28 N70-34175

Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71-NPO-15494-2] c 35 N85-34373

## RESISTORS

High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c 33 N74-22814

Resistive anode image converter  
[NASA-CASE-HQN-10876-1] c 33 N76-27473

Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670

## RESOLUTION

Analog-to-digital conversion system Patent  
[NASA-CASE-XAC-00404] c 08 N70-40125

Spectroscope equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206

Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c 71 N79-23753

## RESOLVERS

Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c 33 N74-27705

Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355

Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132

Angular measurement system  
[NASA-CASE-MFS-25825-1] c 35 N85-20298

Angular measurement system  
[NASA-CASE-MFS-25825-1] c 31 N86-29055

## RESONANCE

Optically selective, acoustically resonant gas detecting transducer  
[NASA-CASE-ARC-10639-1] c 35 N78-13400

Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350

Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N85-20248

Arrangement for damping the resonance in a laser diode  
[NASA-CASE-NPO-15980-1] c 36 N85-30305

## RESONANT FREQUENCIES

Vibrating element electrometer with output signal magnified over input signal by a function of the mechanical Q of the vibrating element Patent  
[NASA-CASE-XAC-02807] c 09 N71-23021

Apparatus for detecting the amount of material in a resonant cavity container Patent  
[NASA-CASE-XNP-02500] c 18 N71-27397

Parasitic suppressing circuit  
[NASA-CASE-ERC-10403-1] c 10 N73-26228

CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c 39 N78-15512

Microbalance --- for measuring particle mass  
[NASA-CASE-MSC-11242] c 35 N78-17358

Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c 71 N81-15767

Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781

Low noise tuned amplifier  
[NASA-CASE-GSC-12567-1] c 33 N84-22887

Acoustic ground impedance meter  
[NASA-CASE-LAR-12995-1] c 35 N84-22933

Single mode levitation and translation  
[NASA-CASE-NPO-16675-1-CU] c 71 N86-20087

Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752

## RESONANT VIBRATION

Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15486-1] c 71 N85-22104

## RESONATORS

High-Q bandpass resonators utilizing bandstop resonator pairs  
[NASA-CASE-GSC-10990-1] c 09 N73-26195

## RESPIRATION

Method and system for respiration analysis Patent  
[NASA-CASE-XFR-08403] c 05 N71-11202

## RESPIRATORS

Respiration monitor  
[NASA-CASE-FRC-10012] c 14 N72-17329

## RESPIRATORY RATE

Gas low pressure low flow rate metering system Patent  
[NASA-CASE-FRC-10022] c 12 N71-26546

Respiratory analysis system and method  
[NASA-CASE-MSC-13436-1] c 05 N73-32015

Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-MFS-21415-1] c 52 N74-20728

## RESPIROMETERS

Metabolic analyzer --- for measuring metabolic rate and breathing dynamics of human beings  
[NASA-CASE-MFS-21415-1] c 52 N74-20728

## RESPONSES

Frequency division multiplex technique  
[NASA-CASE-KSC-10521] c 07 N73-20176

## RESTARTABLE ROCKET ENGINES

Zero gravity starting means for liquid propellant motors Patent  
[NASA-CASE-XNP-01390] c 28 N70-41275

Small rocket engine Patent  
[NASA-CASE-XLE-00685] c 28 N70-41992

## RESUSCITATION

Resuscitation apparatus Patent  
[NASA-CASE-XMS-01115] c 05 N70-39922

## RETAINING

Floating nut retention system  
[NASA-CASE-MSC-16938-1] c 37 N80-23653

Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091

## RETARDERS (DEVICES)

Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293

## RETRADING

Ablative resin Patent  
[NASA-CASE-XLE-05913] c 33 N71-14032

## RETICLES

Optical tracker having overlapping reticles on parallel axes Patent  
[NASA-CASE-XGS-05715] c 23 N71-16100

Star tracking reticles and process for the production thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630

Star tracking reticles  
[NASA-CASE-GSC-11188-1] c 14 N73-32320

Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008

Star scanner --- with a reticle with a pair of slits having differing separation  
[NASA-CASE-GSC-11569-1] c 89 N74-30886

## RETINAL IMAGES

Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117

## RETRACTABLE EQUIPMENT

Runway light Patent  
[NASA-CASE-XLA-00119] c 11 N70-33329

Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701

Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474

Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c 18 N80-14183

CAM controlled retractable door latch  
[NASA-CASE-MSC-20304-1] c 37 N82-31690

Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303

## RETROFIRING

Visual target for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c 31 N69-27499

Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c 14 N70-41812

## RETROREFLECTION

Interferometer servo system Patent  
[NASA-CASE-NPO-10300] c 14 N71-17662

Over-under double-pass interferometer  
[NASA-CASE-NPO-13999-1] c 35 N78-18395

Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14524-1] c 32 N80-24510

## RETROREFLECTORS

Interferometer --- high resolution  
[NASA-CASE-NPO-14448-1] c 74 N81-29963

Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N82-33681

## RETROCKET ENGINES

Steerable solid propellant rocket motor Patent  
[NASA-CASE-XNP-00234] c 28 N70-38645

## REUSABLE HEAT SHIELDING

High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448

## REUSABLE SPACECRAFT

Recoverable single stage spacecraft booster Patent  
[NASA-CASE-XMF-01973] c 31 N70-41588

Space shuttle vehicle and system  
[NASA-CASE-MSC-12433] c 31 N73-14854

Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310

## REUSE

Silica reusable surface insulation  
[NASA-CASE-ARC-10721-1] c 27 N76-22376

Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673

## REVERSE OSMOSIS

Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c 27 N80-23452

Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361

## REVERSED FLOW

Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00170] c 15 N70-36412

Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c 10 N71-18724

- Positive locking check valve Patent  
[NASA-CASE-XMS-09310] c 15 N71-22708
- Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12780-1] c 07 N77-17059
- REYNOLDS NUMBER**
- Wind tunnel test section  
[NASA-CASE-MFS-20509] c 11 N72-17183
- REYNOLDS STRESS**
- System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c 34 N76-27517
- RHENIUM**
- Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454
- RHEOMETERS**
- Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c 35 N80-18357
- RHOMBOIDS**
- Rhomboid prism pair for rotating the plane of parallel light beams  
[NASA-CASE-ARC-11311-1] c 74 N83-13978
- RIBBONS**
- Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411
- Forming tool for ribbon or wire  
[NASA-CASE-XLA-05968] c 15 N72-12408
- Twisted multifilament superconductor  
[NASA-CASE-LEW-11726-1] c 26 N73-26752
- Method of controlling defect orientation in silicon crystal ribbon growth  
[NASA-CASE-NPO-13918-1] c 76 N79-11920
- Solar array strip and a method for forming the same  
[NASA-CASE-NPO-13652-1] c 44 N79-17314
- Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13969-1] c 76 N79-23798
- Bonding machine for forming a solar array strip  
[NASA-CASE-NPO-13652-2] c 44 N79-24431
- Method for forming a solar array strip  
[NASA-CASE-NPO-13652-3] c 44 N80-14474
- Means for growing ribbon crystals without subjecting the crystals to thermal shock-induced strains  
[NASA-CASE-NPO-14298-1] c 76 N80-32244
- Method of growing a ribbon crystal particularly suited for facilitating automated control of ribbon width  
[NASA-CASE-NPO-14295-1] c 76 N80-32245
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt  
[NASA-CASE-NPO-14297-1] c 33 N81-19389
- Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888
- Ribbon growing method and apparatus  
[NASA-CASE-NPO-16306-1-CU] c 76 N85-30934
- RIBOFLAVIN**
- Flavin coenzyme assay  
[NASA-CASE-GSC-10565-1] c 06 N72-25149
- RIBS (SUPPORTS)**
- Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981
- RICE**
- Modification of the physical properties of freeze-dried rice  
[NASA-CASE-MS-13540-1] c 05 N72-33096
- RIDING QUALITY**
- Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445
- RIGID ROTORS**
- Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029
- RIGID STRUCTURES**
- Quick release hook tape Patent  
[NASA-CASE-XMS-10680-1] c 15 N71-25975
- Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155
- Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123
- Folding structure fabricated of rigid panels  
[NASA-CASE-XHQ-02146] c 18 N75-27040
- Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c 31 N81-27324
- RIGID WINGS**
- Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c 02 N70-41863
- RIMS**
- Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152
- RING CURRENTS**
- Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463
- RING STRUCTURES**
- Reversible ring counter employing cascaded single SCR stages Patent  
[NASA-CASE-XGS-01473] c 09 N71-10673
- Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877
- Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c 33 N75-13139
- Laser system with an antiresonant optical ring  
[NASA-CASE-HQN-10844-1] c 36 N75-19653
- Helmet latching and attaching ring  
[NASA-CASE-XMS-04870] c 54 N78-17678
- Collapsible corrugated horn antenna  
[NASA-CASE-LAR-11745-1] c 32 N80-29539
- Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091
- Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11816-1] c 54 N85-21987
- A method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11811-1] c 74 N86-20128
- Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11816-1] c 54 N86-28618
- RING WINGS**
- Ring wing tension vehicle Patent  
[NASA-CASE-XLA-04901] c 31 N71-24315
- RIPPLES**
- Ripple indicator  
[NASA-CASE-KSC-10162] c 09 N72-11225
- RIVETS**
- Printed circuit board with bellows rivet connection Patent  
[NASA-CASE-XNP-05082] c 15 N70-41960
- ROBOTICS**
- Self-locking telescoping manipulator arm  
[NASA-CASE-MFS-25906-1] c 37 N86-20789
- ROCKET ENGINE CASES**
- Method of making a rocket motor casing Patent  
[NASA-CASE-XLE-00409] c 28 N71-15658
- Rocket motor casing Patent  
[NASA-CASE-XLE-05689] c 28 N71-15659
- Payload/burned-out motor case separation system Patent  
[NASA-CASE-XLA-05389] c 31 N71-15687
- Solid propellant liner Patent  
[NASA-CASE-XNP-09744] c 27 N71-16392
- Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293
- Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c 28 N77-10213
- Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-1349] c 20 N77-17143
- ROCKET ENGINE CONTROL**
- Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMF-05964-1] c 20 N79-21124
- ROCKET ENGINE DESIGN**
- Annular rocket motor and nozzle configuration Patent  
[NASA-CASE-XLE-00078] c 28 N70-33284
- Spherical solid-propellant rocket motor Patent  
[NASA-CASE-XLA-00105] c 28 N70-33331
- Spherically-shaped rocket motor Patent  
[NASA-CASE-XHQ-01897] c 28 N70-35381
- Rocket engine Patent  
[NASA-CASE-XLE-00342] c 28 N70-37980
- Swirling flow nozzle Patent  
[NASA-CASE-XNP-03692] c 28 N71-24321
- Ion thruster with a combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c 28 N73-24783
- Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502
- Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c 20 N76-14191
- System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c 20 N76-21275
- ROCKET ENGINES**
- Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860
- Ion thruster cathode Patent Application  
[NASA-CASE-LEW-10814-1] c 28 N70-35422
- Injector-valve device Patent  
[NASA-CASE-XLE-00303] c 15 N70-38535
- Elastic universal joint Patent  
[NASA-CASE-XNP-00416] c 15 N70-38947
- Passively regulated water electrolysis rocket engine Patent  
[NASA-CASE-XGS-08729] c 28 N71-14044
- Method of igniting solid propellants Patent  
[NASA-CASE-XLE-01988] c 27 N71-15634
- Laminar flow enhancement Patent  
[NASA-CASE-NPO-10122] c 12 N71-17631
- Swirling flow nozzle Patent  
[NASA-CASE-XNP-03692] c 28 N71-24321
- Thruster maintenance system Patent  
[NASA-CASE-MFS-20325] c 28 N71-27095
- Purge device for thrust engines Patent  
[NASA-CASE-XMS-04828] c 28 N71-28849
- Method and device for cooling Patent  
[NASA-CASE-HQN-00938] c 33 N71-29053
- Ion thruster magnetic field control  
[NASA-CASE-LEW-10835-1] c 28 N72-22771
- Altitude simulation chamber for rocket engine testing  
[NASA-CASE-MFS-20620] c 11 N72-27262
- Method of making apparatus for sensing temperature  
[NASA-CASE-XLE-05230-2] c 14 N73-13417
- Magneto-plasma-dynamic arc thruster  
[NASA-CASE-LEW-11180-1] c 25 N73-25760
- Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c 20 N74-32919
- Device for installing rocket engines  
[NASA-CASE-MFS-19220-1] c 20 N76-22296
- Ion beam thruster shield  
[NASA-CASE-LEW-12082-1] c 20 N77-10148
- Anode for ion thruster  
[NASA-CASE-LEW-12048-1] c 20 N77-20162
- General purpose rocket furnace  
[NASA-CASE-MFS-23480-1] c 12 N79-26075
- Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MRS-25791-1] c 09 N84-27749
- Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13881-1] c 20 N85-21256
- ROCKET EXHAUST**
- Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c 28 N70-34294
- Rocket thrust throttling system  
[NASA-CASE-LEW-10374-1] c 28 N73-13773
- Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588
- ROCKET FIRING**
- Alleviation of divergence during rocket launch Patent  
[NASA-CASE-XLA-00256] c 31 N71-15663
- ROCKET FLIGHT**
- Technique for control of free-flight rocket vehicles Patent  
[NASA-CASE-XLA-00937] c 31 N71-17691
- ROCKET LAUNCHING**
- Alleviation of divergence during rocket launch Patent  
[NASA-CASE-XLA-00256] c 31 N71-15663
- Controlled release device Patent  
[NASA-CASE-XKS-03338] c 15 N71-24043
- ROCKET LININGS**
- Heat exchanger and method of making --- rocket lining  
[NASA-CASE-LEW-12441-2] c 34 N80-24573
- ROCKET NOZZLES**
- Gimballed, partially submerged rocket nozzle Patent  
[NASA-CASE-XMF-01544] c 28 N70-34162
- Rocket thrust chamber Patent  
[NASA-CASE-XLE-00145] c 28 N70-36806
- Self-sealing, unbonded, rocket motor nozzle closure Patent  
[NASA-CASE-XLA-02651] c 28 N70-41967
- Automatically deploying nozzle exit cone extension Patent  
[NASA-CASE-XLE-01640] c 31 N71-15637
- Rocket nozzle test method Patent  
[NASA-CASE-NPO-10311] c 31 N71-15643
- Collapsible nozzle extension for rocket engines Patent  
[NASA-CASE-MFS-11497] c 28 N71-16224
- Apparatus and method for protecting a photographic device Patent  
[NASA-CASE-NPO-10174] c 14 N71-18465
- Multilayer film cooled pyrolytic graphite rocket nozzle Patent  
[NASA-CASE-XNP-04389] c 28 N71-20942
- Prestressed refractory structure Patent  
[NASA-CASE-XNP-02888] c 18 N71-21068
- Swirling flow nozzle Patent  
[NASA-CASE-XNP-03692] c 28 N71-24321
- Method and device for cooling Patent  
[NASA-CASE-HQN-00938] c 33 N71-29053
- Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708
- Solid propellant rocket motor nozzle  
[NASA-CASE-NPO-11458] c 28 N72-23810
- Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c 20 N79-21123
- Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474
- ROCKET OXIDIZERS**
- Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209
- ROCKET PROPELLANTS**
- Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192

Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736

Bipropellant injector  
[NASA-CASE-XNP-09461] c 28 N72-23809

**ROCKET TEST FACILITIES**

High-vacuum condenser tank for ion rocket tests Patent  
[NASA-CASE-XLE-00168] c 11 N70-33278

Micro-pound extended range thrust stand Patent  
[NASA-CASE-GSC-10710-1] c 28 N71-27094

**ROCKET THRUST**

Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c 28 N70-38181

Electrostatic thruster with improved insulators Patent  
[NASA-CASE-XLE-01902] c 28 N71-10574

Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784

Thrust measurement  
[NASA-CASE-XMS-05731] c 35 N75-29382

**ROCKET VEHICLES**

Umbilical separator for rockets Patent  
[NASA-CASE-XNP-00425] c 11 N70-38202

Support apparatus for dynamic testing Patent  
[NASA-CASE-XMF-01772] c 11 N70-41677

Alleviation of divergence during rocket launch Patent  
[NASA-CASE-XLA-00256] c 31 N71-15663

Technique for control of free-flight rocket vehicles Patent  
[NASA-CASE-XLA-00937] c 31 N71-17691

Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c 37 N80-14398

High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272

**ROCKET-BORNE INSTRUMENTS**

Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432

**ROCKETS**

Hydrogen fire detection system with logic circuit to analyze the spectrum of temporal variations of the optical spectrum  
[NASA-CASE-MFS-13130] c 10 N72-17173

**ROCKS**

Rock drill for recovering samples  
[NASA-CASE-XNP-07478] c 14 N69-21923

Rock sampling --- apparatus for controlling particle size  
[NASA-CASE-XNP-10007-1] c 46 N74-23068

Rock sampling --- method for controlling particle size distribution  
[NASA-CASE-XNP-09755] c 46 N74-23069

Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706

**RODS**

Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c 73 N77-18891

Quasi-containerless glass formation method and apparatus  
[NASA-CASE-MFS-28090-1] c 27 N86-21684

Lightning discharge protection rod  
[NASA-CASE-LAR-13470-1] c 03 N86-26296

**ROLL**

Roll alignment detector  
[NASA-CASE-GSC-10514-1] c 14 N72-20379

**ROLLER BEARINGS**

Method of lubricating rolling element bearings Patent  
[NASA-CASE-XLE-09527] c 15 N71-17688

Semi-linear ball bearing Patent  
[NASA-CASE-XLA-02809] c 15 N71-22982

Low mass rolling element for bearings  
[NASA-CASE-LEW-11087-1] c 15 N73-30458

Method of making rolling element bearings  
[NASA-CASE-LEW-11087-2] c 37 N74-15128

Bearing material --- composite material with low friction surface for rolling or sliding contact  
[NASA-CASE-LEW-11930-1] c 24 N76-22309

**ROLLERS**

Method of improving the reliability of a rolling element system Patent  
[NASA-CASE-XLE-02999] c 15 N71-16052

Load regulating latch  
[NASA-CASE-MSC-19535-1] c 37 N77-32499

Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587

**ROLLING CONTACT LOADS**

Rolling element bearings Patent  
[NASA-CASE-XLE-09527-2] c 15 N71-26189

**ROLLING MOMENTS**

Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c 21 N70-41856

**ROOM TEMPERATURE**

Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895

**ROTARY GYROSCOPES**

Closed loop fiber optic rotation sensor  
[NASA-CASE-NPO-16558-1-CU] c 74 N86-20129

**ROTARY STABILITY**

Reactance control system Patent  
[NASA-CASE-XMF-01598] c 21 N71-15583

Two component bearing Patent  
[NASA-CASE-XLA-00013] c 15 N71-29136

Lubricated journal bearing  
[NASA-CASE-LEW-11076-3] c 37 N75-30562

Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c 37 N77-19458

Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136

Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082

Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N86-19611

**ROTARY WING AIRCRAFT**

Aircraft control system  
[NASA-CASE-ERC-10439] c 02 N73-19004

Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N86-24700

**ROTARY WINGS**

Variable geometry rotor system  
[NASA-CASE-LAR-10557] c 02 N72-11018

Hingeless helicopter rotor with improved stability  
[NASA-CASE-ARC-10807-1] c 05 N77-17029

Locking redundant link  
[NASA-CASE-LAR-11900-1] c 37 N79-14382

Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c 05 N80-14107

Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c 05 N81-19087

Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136

Shapes for rotating airfoils  
[NASA-CASE-LAR-12396-1] c 02 N84-28732

Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400

**ROTATING BODIES**

Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485

Laser apparatus for removing material from rotating objects Patent  
[NASA-CASE-MFS-11279] c 16 N71-20400

Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c 33 N75-13139

Angular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c 15 N76-14158

Axially and radially controllable magnetic bearing  
[NASA-CASE-GSC-11551-1] c 37 N76-18459

Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c 15 N77-10112

Rotatable mass for a flywheel  
[NASA-CASE-MFS-23051-1] c 37 N79-10422

Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c 71 N79-20827

Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c 74 N79-34011

Apparatus for and method of compensating dynamic unbalance  
[NASA-CASE-GSC-12550-1] c 37 N84-28082

Airborne tracking Sun photometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N86-21982

**ROTATING CYLINDERS**

Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c 51 N78-27733

Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15527-1] c 37 N81-33482

Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N85-29290

**ROTATING DISKS**

Foil seal  
[NASA-CASE-XLE-05130] c 15 N69-21362

Scanning aspect sensor employing an apertured disc and a commutator  
[NASA-CASE-XGS-08266] c 14 N69-27432

Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101

Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N84-25015

Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697

**ROTATING ELECTRICAL MACHINES**

Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479

Direct current motor with stationary armature and field Patent  
[NASA-CASE-XGS-05290] c 09 N71-25999

Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c 09 N71-27364

**ROTATING ENVIRONMENTS**

Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373

Rotating space station simulator Patent  
[NASA-CASE-XLA-03127] c 11 N71-10776

**ROTATING GENERATORS**

Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813

Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c 44 N80-21828

Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c 07 N81-27096

**ROTATING MIRRORS**

Retrodiffractive modulator Patent  
[NASA-CASE-GSC-10062] c 14 N71-15605

Attitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880

Method for generating ultra-precise angles Patent  
[NASA-CASE-XGS-04173] c 19 N71-26674

Method and apparatus for optically monitoring the angular position of a rotating mirror  
[NASA-CASE-GSC-11353-1] c 74 N74-21304

Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459

**ROTATING SHAFTS**

Foil seal Patent  
[NASA-CASE-XLE-05130-2] c 15 N71-19570

Anemometer with braking mechanism Patent  
[NASA-CASE-XMF-05224] c 14 N71-23726

Detent servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695

Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294

Two component bearing Patent  
[NASA-CASE-XLA-00013] c 15 N71-29136

Hall effect transducer  
[NASA-CASE-LAR-10620-1] c 09 N72-25255

Spiral groove seal --- for rotating shaft  
[NASA-CASE-XLE-10326-4] c 37 N74-15125

Digital servo controller --- for rotating antenna shaft  
[NASA-CASE-KSC-10769-1] c 33 N74-29556

Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379

Ergometer calibrator --- for any ergometer utilizing rotating shaft  
[NASA-CASE-MFS-21045-1] c 35 N75-15932

Fluid seal for rotating shafts  
[NASA-CASE-LEW-11676-1] c 37 N76-22541

Cyclical bi-directional rotary actuator  
[NASA-CASE-GSC-11883-1] c 37 N77-19458

Tachometer  
[NASA-CASE-MFS-23175-1] c 35 N77-30436

Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425

Rotary electric device  
[NASA-CASE-GSC-12138-1] c 33 N79-20314

Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c 37 N80-28711

Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c 37 N81-22360

Clutchless multiple drive source for output shaft  
[NASA-CASE-ARC-11325-1] c 37 N82-22496

Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N83-36484

Resilient seal ring assembly with spring means applying force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497

Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493

Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084

Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333

**ROTATION**

Semi-linear ball bearing Patent  
[NASA-CASE-XLA-02809] c 15 N71-22982

Mechanical actuator Patent  
[NASA-CASE-XGS-04548] c 15 N71-24045

Positioning mechanism  
[NASA-CASE-NPO-10679] c 15 N72-21462

Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492

System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516

Acoustic rotation control  
[NASA-CASE-NPO-15689-1] c 71 N84-23233

## ROTOR AERODYNAMICS

Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c 05 N80-14107

## ROTOR BLADES

Non-destructive method for applying and removing instrumentation on helicopter rotor blades  
[NASA-CASE-LAR-11201-1] c 35 N78-24515

Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c 07 N79-10057

## ROTOR BLADES (TURBOMACHINERY)

Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c 28 N71-28928

Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c 28 N71-29154

Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c 37 N74-11300

Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c 07 N74-28226

Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c 07 N77-27116

Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c 07 N77-32148

Tip cap for a rotor blade  
[NASA-CASE-LEW-113654-1] c 07 N84-22560

Shapes for rotating airfoils  
[NASA-CASE-LAR-12396-1] c 02 N84-28732

## ROTOR LIFT

Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c 05 N79-17847

## ROTOR SPEED

Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904

## ROTORCRAFT AIRCRAFT

Constant lift rotor for a heavier than air craft  
[NASA-CASE-ARC-11045-1] c 05 N79-17847

## ROTOR

Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00085] c 28 N70-39895

Angular position and velocity sensing apparatus Patent  
[NASA-CASE-XGS-05680] c 14 N71-17585

Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c 09 N71-23548

Detent servo motor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695

Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420

Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515

Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569

Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788

Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N86-24700

## RUBBER

Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c 27 N78-33228

Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c 44 N79-17313

Enhancement of in vitro guanylate propagation  
[NASA-CASE-NPO-12513-1] c 51 N83-17045

## RUBBER COATINGS

Intumescent paint containing nitrile rubber  
[NASA-CASE-ARC-10196-1] c 18 N73-13562

## RUBY

Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992

Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143

## RUBY LASERS

Laser coolant and ultraviolet filter  
[NASA-CASE-MFS-20180] c 16 N72-12440

## RUNWAY ALIGNMENT

Magnetic position detection method and apparatus  
[NASA-CASE-ARC-10179-1] c 21 N72-22619

## RUNWAY CONDITIONS

Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N84-32398

## RUNWAY LIGHTS

Runway light Patent  
[NASA-CASE-XLA-00119] c 11 N70-33329

Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-16059

## RUNWAYS

Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N84-32398

## RUPTURING

Means for controlling rupture of shock tube diaphragms Patent  
[NASA-CASE-XAC-00731] c 11 N71-15960

## S

## SABOT PROJECTILES

Hypervelocity gun --- using both electric and chemical energy for projectile propulsion  
[NASA-CASE-XLE-03186-1] c 09 N79-21084

## SAFETY

Phosphorus-containing imide resins  
[NASA-CASE-ARC-11386-3] c 27 N84-22745

## SAFETY DEVICES

Pressure suit tie-down mechanism Patent  
[NASA-CASE-XMS-00784] c 05 N71-12335

Positive locking check valve Patent  
[NASA-CASE-XMS-09310] c 15 N71-22706

Protective device for machine and metalworking tools Patent  
[NASA-CASE-XLE-01092] c 15 N71-22797

Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895

Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375

Restraint torso for a pressurized suit  
[NASA-CASE-MS-C-12397-1] c 05 N72-25119

Totally confined explosive welding --- apparatus to reduce noise level and protect personnel during explosive bonding  
[NASA-CASE-LAR-10641-1] c 37 N74-21057

Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421

Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c 05 N75-25915

Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477

Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287

Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343

Variable response load limiting device --- for aircraft seats  
[NASA-CASE-LAR-12801-1] c 37 N82-20544

Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801

## SAFETY FACTORS

Safety flywheel --- using flexible materials energy storage  
[NASA-CASE-HQN-10688-1] c 44 N79-14527

## SAHA EQUATIONS

Cosmic dust analyzer  
[NASA-CASE-MS-C-13802-2] c 35 N78-15431

## SALT BATHS

Process for applying a protective coating for salt bath brazing Patent  
[NASA-CASE-XLE-00046] c 15 N70-33311

## SAMARIUM

Gd or Sm doped silicon semiconductor composition Patent  
[NASA-CASE-XLE-10715] c 26 N71-23292

## SAMPLERS

Vacuum probe surface sampler  
[NASA-CASE-LAR-10623-1] c 14 N73-30395

Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407

## SAMPLES

Plural output optometric sample cell and analysis system  
[NASA-CASE-NPO-10233-1] c 74 N78-33913

Mobile sampler for use in acquiring samples of terrestrial atmospheric gases  
[NASA-CASE-NPO-15220-1] c 45 N83-25217

## SAMPLING

Sample collecting impact bit Patent  
[NASA-CASE-XNP-01412] c 15 N70-42034

Fluid sample collector Patent  
[NASA-CASE-XMS-06767-1] c 14 N71-20435

Atmospheric sampling devices  
[NASA-CASE-NPO-11373] c 13 N72-25323

Digital to analog conversion apparatus  
[NASA-CASE-MS-C-12458-1] c 08 N73-32081

Rock sampling --- apparatus for controlling particle size  
[NASA-CASE-XNP-10007-1] c 46 N74-23068

Rock sampling --- method for controlling particle size distribution  
[NASA-CASE-XNP-09755] c 46 N74-23069

Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c 35 N75-12272

## Automatic biowaste sampling

[NASA-CASE-MS-C-14640-1] c 54 N76-14804

Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c 35 N78-27384

CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N79-17134

Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MS-C-16841-1] c 34 N79-24285

Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849

Moisture content and gas sampling device  
[NASA-CASE-MS-C-18886-1] c 35 N85-29213

Optical multiple sample vacuum integrating sphere  
[NASA-CASE-GSC-12849-1] c 74 N86-26190

Solid sorbent air sampler  
[NASA-CASE-MS-C-20653-1] c 35 N86-26595

## SANDWICH STRUCTURES

Sandwich panel construction Patent  
[NASA-CASE-XLA-00349] c 33 N70-37979

Micrometeoroid velocity measuring device Patent  
[NASA-CASE-XLA-00495] c 14 N70-41332

Meteoroid sensing apparatus having a coincidence network connected to a pair of capacitors Patent  
[NASA-CASE-XLE-01246] c 14 N71-10797

Method of making inflatable honeycomb Patent  
[NASA-CASE-XLA-03492] c 15 N71-22713

Convoluting device for forming convolutions and the like Patent  
[NASA-CASE-XNP-05297] c 15 N71-23811

Composite sandwich lattice structure  
[NASA-CASE-LAR-11898-1] c 24 N78-10214

Low density bismaleimide-carbon microballoon composites  
[NASA-CASE-ARC-11040-1] c 24 N79-16915

Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296

Multilayer thermal protection system  
[NASA-CASE-LAR-12620-1] c 24 N82-32417

## SAPPHIRE

Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-1] c 37 N75-15992

Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide  
[NASA-CASE-GSC-11577-3] c 24 N79-25143

## SATELLITE ANTENNAS

Antenna system using parasitic elements and two driven elements at 90 deg angle fed 180 deg out of phase Patent  
[NASA-CASE-XLA-00414] c 07 N70-38200

Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent  
[NASA-CASE-XGS-02807] c 31 N71-23009

Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341

Microwave switching power divider --- antenna feeds  
[NASA-CASE-GSC-12420-1] c 33 N82-16340

## SATELLITE ATTITUDE CONTROL

Photosensitive device to detect bearing deviation Patent  
[NASA-CASE-XNP-00438] c 21 N70-35089

Attitude control for spacecraft Patent  
[NASA-CASE-XNP-02982] c 31 N70-41855

Satellite despin device Patent  
[NASA-CASE-XMF-08523] c 31 N71-20396

Attitude control and damping system for spacecraft Patent  
[NASA-CASE-XLA-02551] c 21 N71-21708

Gravity gradient attitude control system Patent  
[NASA-CASE-GSC-10555-1] c 21 N71-27324

Spacecraft attitude control method and apparatus  
[NASA-CASE-HQN-10439] c 21 N72-21624

Dual purpose momentum wheels for spacecraft with magnetic recording  
[NASA-CASE-NPO-11481] c 21 N73-13644

Combination automatic-starting electrical plasma torch and gas shutoff valve --- for satellite attitude control  
[NASA-CASE-XLE-10717] c 37 N75-29426

Attitude control system  
[NASA-CASE-MFS-22787-1] c 15 N77-10113

Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152

## SATELLITE COMMUNICATION

Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c 07 N71-24621

Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900

## SATELLITE CONTROL

Stabilization of gravity oriented satellites Patent  
[NASA-CASE-XAC-01591] c 31 N71-17729

## SATELLITE DESIGN

- Inflation system for balloon type satellites Patent  
[NASA-CASE-XGS-03351] c 31 N71-16081
- SATELLITE INSTRUMENTS**  
Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c 14 N71-21082
- SATELLITE NETWORKS**  
Satellite interface synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149
- SATELLITE OBSERVATION**  
Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327
- SATELLITE ORBITS**  
Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HQN-00936] c 31 N71-29050
- SATELLITE ORIENTATION**  
Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297  
Cartwheel satellite synchronization system Patent  
[NASA-CASE-XGS-05579] c 31 N71-15676  
Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HQN-00936] c 31 N71-29050  
Analog spatial maneuver computer  
[NASA-CASE-GSC-10880-1] c 08 N72-11172
- SATELLITE PERTURBATION**  
Method and means for damping nutation in a satellite Patent  
[NASA-CASE-XMF-00442] c 31 N71-10747
- SATELLITE POWER TRANSMISSION (TO EARTH)**  
Microwave power transmission beam safety system  
[NASA-CASE-NPO-14224-1] c 33 N80-18287
- SATELLITE ROTATION**  
Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485  
Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c 30 N70-40016  
Apparatus for changing the orientation and velocity of a spinning body traversing a path Patent  
[NASA-CASE-HQN-00936] c 31 N71-29050  
Magnetic spin reduction system for free spinning objects  
[NASA-CASE-MFS-25966-1] c 16 N86-26352
- SATELLITE TELEVISION**  
Adaptive system and method for signal generation Patent  
[NASA-CASE-GSC-11367] c 10 N71-26374
- SATELLITE TRACKING**  
Tracking receiver Patent  
[NASA-CASE-XGS-08679] c 10 N71-21473  
Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854  
Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472
- SATELLITE TRANSMISSION**  
Asynchronous, multiplexing, single line transmission and recovery data system --- for satellite use  
[NASA-CASE-NPO-13321-1] c 32 N75-26195
- SATELLITE-BORNE INSTRUMENTS**  
Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
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- SATELLITE-BORNE PHOTOGRAPHY**  
Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly --- for use with cameras mounted in satellites  
[NASA-CASE-GSC-11560-1] c 33 N74-20861  
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- SATURABLE REACTORS**  
Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418
- SATURATION**  
Method of detecting impending saturation of magnetic cores  
[NASA-CASE-ERC-10089] c 23 N72-17747
- SAWS**  
Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650
- SAWTOOTH WAVEFORMS**  
Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c 09 N70-41675
- SCANNERS**  
Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460  
Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980

- Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539
- Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c 14 N71-21082
- Electronic scanning of 2-channel monopulse patterns Patent  
[NASA-CASE-GSC-10299-1] c 09 N71-24804  
Method and apparatus for mapping the sensitivity of the face of a photodetector specifically a PMT  
[NASA-CASE-LAR-10320-1] c 09 N72-23172  
Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c 35 N74-10415  
Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009  
Fast scan control for deflection type mass spectrometers  
[NASA-CASE-LAR-11428-1] c 35 N74-34857  
Electronically scanned pressure sensor module with in situ calibration capability  
[NASA-CASE-LAR-12230-1] c 35 N79-14347  
Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c 32 N80-28578  
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[NASA-CASE-GSC-12032-2] c 43 N82-13465  
Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MSC-18627-1] c 74 N82-30071  
Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272  
Self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c 35 N84-14491  
Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928  
Electronic scanning pressure measuring system and transducer package  
[NASA-CASE-ARC-11361-1] c 35 N84-22934  
Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247
- SCANNING**  
Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300  
Method of erasing target material of a vidicon tube or the like Patent  
[NASA-CASE-XNP-06028] c 09 N71-23189  
Position determination systems --- using orbital antenna scan of celestial bodies  
[NASA-CASE-MSC-12593-1] c 17 N76-21250  
Magnetometer with a miniature transducer and automatic scanning  
[NASA-CASE-LAR-11617-2] c 35 N78-32397  
System and method for character recognition  
[NASA-CASE-NPO-11337-1] c 74 N81-19896
- SCATTERING CROSS SECTIONS**  
Method and means for helium/hydrogen ratio measurement by alpha scattering  
[NASA-CASE-NPO-14079-1] c 25 N80-20334
- SCENE ANALYSIS**  
Simulator scene display evaluation  
[NASA-CASE-ARC-11504-1] c 09 N84-16221  
Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447
- SCHLIEREN PHOTOGRAPHY**  
System and method for obtaining wide screen Schlieren photographs  
[NASA-CASE-NPO-14174-1] c 74 N79-20856
- SCHMIDT CAMERAS**  
Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-14372-1] c 35 N80-26635
- SCHMIDT TELESCOPES**  
Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248
- SCHOOLS**  
Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205
- SCHOTTKY DIODES**  
High voltage, high current Schottky barrier solar cell  
[NASA-CASE-NPO-13482-1] c 44 N78-13526  
Solar cells having integral collector grids  
[NASA-CASE-LEW-12819-1] c 44 N79-11467  
Back wall solar cell  
[NASA-CASE-LEW-12236-2] c 44 N79-14528  
Schottky barrier solar cell  
[NASA-CASE-NPO-13689-2] c 44 N81-29525  
Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780

- Submillimeter wave Schottky barrier diode with low series resistance and low noise  
[NASA-CASE-NPO-15935-1] c 33 N83-12334  
Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947  
Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112  
GaAs Schottky barrier photo-responsive device and method of fabrication  
[NASA-CASE-GSC-12816-1] c 76 N86-20150
- SCOOPS**  
Aeroflexible structures  
[NASA-CASE-XLA-06095] c 01 N69-39981
- SCORING**  
Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469
- SCRAMBLING (COMMUNICATION)**  
Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583
- SCREWS**  
Electromechanical control actuator system Patent  
[NASA-CASE-ERC-10022] c 15 N71-26635  
Adjustable support  
[NASA-CASE-NPO-10721] c 15 N72-27484  
Low noise lead screw positioner  
[NASA-CASE-NPO-15617-1] c 35 N82-33681  
Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-1] c 37 N85-29289
- SCRUBBERS**  
High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588  
Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1] c 31 N85-20154  
Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1CU] c 35 N86-29174
- SEA ICE**  
A technique for breaking ice in the path of a ship  
[NASA-CASE-LAR-10815-1] c 16 N72-22520
- SEA STATES**  
Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667
- SEA SURFACE TEMPERATURE**  
Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723
- SEALERS**  
Pressure garment joint Patent  
[NASA-CASE-XMS-09636] c 05 N71-12344  
Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c 03 N71-22974  
Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c 03 N71-23006  
Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710  
Polyimides of ether-linked aryl tetracarboxylic dianhydrides  
[NASA-CASE-MFS-22355-1] c 23 N76-15268  
High performance channel injection sealant invention abstract  
[NASA-CASE-ARC-14408-1] c 27 N82-33523
- SEALING**  
Foil seal  
[NASA-CASE-XLE-05130] c 15 N69-21362  
Sealed battery gas manifold construction Patent  
[NASA-CASE-XNP-03378] c 03 N71-11051  
Sealing device for an electrochemical cell Patent  
[NASA-CASE-XGS-02630] c 03 N71-22974  
Sealing member and combination thereof and method of producing said sealing member Patent  
[NASA-CASE-XMS-01625] c 15 N71-23022  
Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256  
Valve seal  
[NASA-CASE-NPO-10606] c 15 N72-25451  
Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633
- SEALS (STOPPERS)**  
Spacecraft battery seals  
[NASA-CASE-XGS-03864] c 15 N69-24320  
Flexible seal for valves Patent  
[NASA-CASE-XLE-00101] c 15 N70-33376  
Shrink-fit gas valve Patent  
[NASA-CASE-XGS-00587] c 15 N70-35087  
Thin-walled pressure vessel Patent  
[NASA-CASE-XLE-04677] c 15 N71-10577  
Foil seal Patent  
[NASA-CASE-XLE-05130-2] c 15 N71-19570  
Storage container for electronic devices Patent  
[NASA-CASE-MFS-20075] c 09 N71-26133

Rotating shaft seal Patent  
[NASA-CASE-XNP-02862-1] c 15 N71-26294

Spiral groove seal --- for rotating shaft  
[NASA-CASE-XLE-10326-4] c 37 N74-15125

Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063

High speed, self-acting shaft seal --- for use in turbine engines  
[NASA-CASE-LEW-11274-1] c 37 N75-21831

Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482

Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090

Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318

Retractable environmental seal  
[NASA-CASE-MFS-23646-1] c 37 N79-22474

Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c 37 N79-22475

Fluid pressure balanced seal  
[NASA-CASE-XGS-01286-1] c 37 N79-33469

Gas path seal  
[NASA-CASE-NPO-12131-3] c 37 N80-18400

Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658

Circumferential shaft seal  
[NASA-CASE-LEW-12119-1] c 37 N80-28711

Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MS-18134-1] c 37 N81-15363

Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c 37 N82-12442

Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MS-18422-1] c 37 N82-16408

Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540

Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c 37 N82-24490

Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-12368-2] c 37 N82-26674

Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-12368-1] c 27 N82-29453

Process for preparing perfluorotriazine elastomers and precursors thereof  
[NASA-CASE-ARC-11402-1] c 27 N84-22744

Method of fabricating an abrasible gas path seal  
[NASA-CASE-LEW-12369-2] c 37 N84-22957

Oxidizing seal for a turbine tip gas path  
[NASA-CASE-LEW-14053-1] c 37 N85-34402

Dual motion valve with single motion input  
[NASA-CASE-MFS-28058-1] c 37 N86-19611

Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788

Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N86-32740

**SEAMS (JOINTS)**

Traveling sealer for contoured table Patent  
[NASA-CASE-XLA-01494] c 15 N71-24164

Omnidirectional joint Patent  
[NASA-CASE-XMS-09635] c 05 N71-24623

Method of making pressure tight seal for super alloy  
[NASA-CASE-LAR-10170-1] c 37 N74-11301

**SEAT BELTS**

Shoulder harness and lap belt restraint system  
[NASA-CASE-ARC-10519-2] c 05 N75-25915

**SEATS**

Seat cushion to provide realistic acceleration cues to aircraft simulator pilot  
[NASA-CASE-LAR-12149-2] c 09 N79-31228

Variable response load limiting device --- for aircraft seats  
[NASA-CASE-LAR-12801-1] c 37 N82-20544

Fire blocking systems for aircraft seat cushions  
[NASA-CASE-ARC-11423-1] c 03 N84-33394

Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797

**SECONDARY EMISSION**

Textured carbon surfaces on copper  
[NASA-CASE-LEW-14130-1] c 31 N85-20156

Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587

**SECTORS**

Journal Bearings  
[NASA-CASE-LEW-11076-2] c 37 N74-32921

**SECURITY**

Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559

Portable appliance security apparatus  
[NASA-CASE-GSC-12399-1] c 33 N81-25299

Random digital encryption secure communication system  
[NASA-CASE-MS-16482-1] c 32 N82-31583

Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272

**SEGMENTS**

Method and apparatus for making curved reflectors  
[NASA-CASE-XLE-08917] c 15 N71-15597

**SEISMIC WAVES**

Seismic displacement transducer Patent  
[NASA-CASE-XMF-00479] c 14 N70-34794

Seismic vibration source  
[NASA-CASE-NPO-14112-1] c 46 N79-22679

Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c 46 N79-23555

**SEISMOGRAPHS**

Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272

**SELECTORS**

Molecular beam velocity selector Patent  
[NASA-CASE-XLE-01533] c 11 N71-10777

Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862

**SELF ALIGNMENT**

Electro-optical alignment control system Patent  
[NASA-CASE-XMF-00908] c 14 N70-40238

Electrical self-aligning connector --- orbital service vehicles  
[NASA-CASE-MFS-25211-2] c 33 N84-14423

**SELF ERECTING DEVICES**

Flexible foam erectable space structures Patent  
[NASA-CASE-XLA-00686] c 31 N70-34135

Erectable modular space station Patent  
[NASA-CASE-XLA-00678] c 31 N70-34296

Manned space station Patent  
[NASA-CASE-XLE-00258] c 31 N70-38676

Foldable conduit Patent  
[NASA-CASE-XLE-00620] c 32 N70-41579

Self-erecting reflector Patent  
[NASA-CASE-XGS-09190] c 31 N71-16102

Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c 09 N71-20658

Foldable self-erecting joint --- space erectable structures  
[NASA-CASE-MS-20635-1] c 18 N84-32424

**SELF FOCUSING**

Focal axis resolver for offset reflector antennas  
[NASA-CASE-GSC-12630-1] c 33 N83-36355

**SELF LUBRICATING MATERIALS**

Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710

Self-lubricating gears and other mechanical parts Patent  
[NASA-CASE-MFS-14971] c 15 N71-24984

Method of making bearing material  
[NASA-CASE-LEW-11930-3] c 24 N80-33482

**SELF LUBRICATION**

Method of making bearing materials --- self-lubricating, oxidation resistant composites for high temperature applications  
[NASA-CASE-LEW-11930-4] c 24 N79-17916

**SELF MANEUVERING UNITS**

Hand-held self-maneuvering unit Patent  
[NASA-CASE-XMS-05304] c 05 N71-12336

Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585

**SELF PROPAGATION**

Optical frequency waveguide Patent  
[NASA-CASE-HQN-10541-1] c 07 N71-26291

**SELF SEALING**

Modification of one man life raft  
[NASA-CASE-LAR-10241-1] c 54 N74-14845

Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442

Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N86-21859

**SELF TESTS**

Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633

**SEMICONDUCTOR DEVICES**

Test fixture for pellet-like electrical elements  
[NASA-CASE-XNP-06032] c 09 N69-21926

Semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980] c 09 N69-27422

A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148

Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819

Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560

Method of making a silicon semiconductor device Patent  
[NASA-CASE-XLE-02792] c 26 N71-10607

Apparatus and method for separating a semiconductor wafer Patent  
[NASA-CASE-ERC-10138] c 26 N71-14354

Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c 09 N71-18721

Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c 03 N71-20407

Multialarm summary alarm Patent  
[NASA-CASE-XLE-03061-1] c 10 N71-24798

Method of temperature compensating semiconductor strain gages Patent  
[NASA-CASE-XLA-04555-1] c 14 N71-25892

Pneumatic oscillator Patent  
[NASA-CASE-LEW-10345-1] c 10 N71-25899

Method and apparatus for detecting gross leaks Patent  
[NASA-CASE-ERC-10033] c 14 N71-26672

Transistor drive regulator Patent  
[NASA-CASE-LEW-10233] c 10 N71-27126

Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992

Method of manufacturing semiconductor devices using refractory dielectrics  
[NASA-CASE-XER-08476-1] c 26 N72-17820

Fabrication of single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c 09 N72-22199

Electrical insulating layer process  
[NASA-CASE-LEW-10489-1] c 15 N72-25447

Gunn-type solid state devices  
[NASA-CASE-XER-07895] c 26 N72-25679

Semiconductor transducer device  
[NASA-CASE-ERC-10087-2] c 14 N72-31446

Hermetically sealed semiconductor  
[NASA-CASE-GSC-10791-1] c 15 N73-14489

Process for fabricating SiC semiconductor devices  
[NASA-CASE-LEW-12094-1] c 76 N76-25049

Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c 35 N78-18390

Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950

Apparatus for measuring semiconductor device resistance  
[NASA-CASE-NPO-14424-1] c 33 N80-32650

Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280

Pyroelectric detector arrays  
[NASA-CASE-LAR-12363-2] c 33 N83-24763

Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765

Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112

Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113

Method and apparatus for measuring minority carrier lifetime in a direct band-gap semiconductor  
[NASA-CASE-NPO-163371-1] c 33 N85-20251

Low stress semiconductor-insulator interface for cryogenic device applications  
[NASA-CASE-NPO-16394-1] c 76 N85-20906

Inelastic tunnel diodes  
[NASA-CASE-LEW-13833-1] c 33 N85-21492

Low defect, high purity crystalline layers grown by selective deposition  
[NASA-CASE-NPO-15813-1] c 76 N85-30922

**SEMICONDUCTOR JUNCTIONS**

Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027

Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334

Semiconductor surface protection material  
[NASA-CASE-ERC-10339-1] c 18 N73-30532

High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764

Screen printed interdigitated back contact solar cell  
[NASA-CASE-LEW-13414-1] c 44 N85-20530



- Method of measuring field funneling and range straggling in semiconductor charge-collecting junctions  
[NASA-CASE-NPO-16584-1-CU] c 76 N86-25269
- SEMICONDUCTORS (MATERIALS)**
- Depositing semiconductor films utilizing a thermal gradient  
[NASA-CASE-XKS-04614] c 15 N69-21460
- System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MS-C-12259-1] c 07 N70-12616
- High efficiency multivibrator Patent  
[NASA-CASE-XAC-00942] c 10 N71-16042
- Method of making impurity-type semiconductor electrical contacts Patent  
[NASA-CASE-XMF-01016] c 26 N71-17818
- Method of electrolytically binding a layer of semiconductors together Patent  
[NASA-CASE-XNP-01959] c 26 N71-23043
- Gd or Sm doped silicon semiconductor composition Patent  
[NASA-CASE-XLE-10715] c 26 N71-23292
- Infrared detectors  
[NASA-CASE-LAR-10728-1] c 14 N73-12445
- Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c 33 N75-27251
- Vapor deposition apparatus --- semiconductors and gallium arsenides  
[NASA-CASE-HQN-10462] c 25 N75-29192
- Application of semiconductor diffusants to solar cells by screen printing  
[NASA-CASE-LEW-12775-1] c 44 N79-11468
- Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c 76 N79-21910
- Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c 33 N80-18286
- Method of making macrocrystalline or single crystal semiconductive material and products produced thereby --- epitaxial substrates using low melting materials for photovoltaic cells  
[NASA-CASE-NPO-15904-1] c 76 N83-21993
- Photoelectrochemical cells including chalcogenophosphate photoelectrodes  
[NASA-CASE-LAR-12958-1] c 44 N84-23019
- Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112
- Total immersion crystal growth  
[NASA-CASE-NPO-15800-2] c 76 N85-22178
- Method for determining the point of zero zeta potential of semiconductor  
[NASA-CASE-LAR-12893-1] c 76 N85-30923
- Method for growing low defect, high purity crystalline layers  
[NASA-CASE-NPO-15813-2] c 76 N85-30933
- High band GaP 3-5 tunneling junction for silicon multijunction solar cells  
[NASA-CASE-NPO-16526-1CU] c 44 N86-21981
- Floating emitter solar cell junction transistor  
[NASA-CASE-NPO-16467-1-CU] c 33 N86-24908
- Method of making macrocrystalline or single crystal semiconductor material  
[NASA-CASE-NPO-15904-1] c 76 N86-28760
- SENSITIVITY**
- Active RC networks  
[NASA-CASE-ARC-10042-2] c 10 N72-11256
- SENSITOMETRY**
- Condition sensor system and method  
[NASA-CASE-MS-C-14805-1] c 54 N78-32720
- SENSORS**
- Bonding method in the manufacture of continuous regression rate sensor devices  
[NASA-CASE-LAR-10337-1] c 24 N75-30260
- Medical subject monitoring systems --- multichannel monitoring systems  
[NASA-CASE-MS-C-14180-1] c 52 N76-14757
- Trace water sensor  
[NASA-CASE-NPO-15722-1] c 35 N85-29212
- SENSORY PERCEPTION**
- Tactile sensing means for prosthetic limbs  
[NASA-CASE-MFS-16570-1] c 05 N73-32013
- SEPARATED FLOW**
- Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c 28 N70-34294
- Double hinged flap Patent  
[NASA-CASE-XLA-01290] c 02 N70-42016
- Mixture separation cell Patent  
[NASA-CASE-XMS-02952] c 18 N71-20742
- Flow separation detector  
[NASA-CASE-ARC-11046-1] c 35 N78-14364
- SEPARATORS**
- Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465
- Umbilical separator for rockets Patent  
[NASA-CASE-XNP-00425] c 11 N70-38202
- Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c 15 N70-40062
- Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c 15 N71-15968
- Separator Patent  
[NASA-CASE-XLA-00415] c 15 N71-16079
- Water separating system Patent  
[NASA-CASE-XMS-13052] c 14 N71-20427
- Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023
- Air removal device  
[NASA-CASE-XLA-8914] c 15 N73-12492
- Centrifugal lyophobic separator  
[NASA-CASE-LAR-10194-1] c 34 N74-30608
- Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282
- Method and apparatus for fluffing, separating, and cleaning fibers  
[NASA-CASE-LAR-11224-1] c 37 N76-18456
- Gels as battery separators for soluble electrode cells  
[NASA-CASE-LEW-12364-1] c 44 N77-22606
- Low gravity phase separator  
[NASA-CASE-MS-C-14773-1] c 35 N78-12390
- Automatic multiple-sample applicator and electrophoresis apparatus  
[NASA-CASE-ARC-10091-1] c 25 N78-14104
- Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090
- Inorganic-organic separators for alkaline batteries  
[NASA-CASE-LEW-12649-1] c 44 N78-25530
- Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c 44 N79-17313
- Water separator  
[NASA-CASE-XMS-01295-1] c 37 N79-21345
- In situ self cross-linking of polyvinyl alcohol battery separators  
[NASA-CASE-LEW-12972-1] c 44 N79-25481
- Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12065-1] c 24 N81-14000
- Polyvinyl alcohol battery separator containing inert filler --- alkaline batteries  
[NASA-CASE-LEW-13556-1] c 44 N81-27615
- Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268
- Process of treating cellulosic membrane and alkaline with membrane separator  
[NASA-CASE-GSC-10019-1] c 44 N82-24641
- Separator for alkaline batteries and method of making same  
[NASA-CASE-GSC-10350-1] c 44 N82-24642
- Separator for alkaline electric cells and method of making  
[NASA-CASE-GSC-10017-1] c 44 N82-24643
- Separator for alkaline electric batteries and method of making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644
- Alkaline electrochemical cells and method of making  
[NASA-CASE-GSC-10349-1] c 44 N82-24645
- Aqueous alkali metal hydroxide insoluble cellulose ether membrane  
[NASA-CASE-XGS-05584-1] c 25 N82-29370
- Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708
- Electrophoresis device  
[NASA-CASE-MFS-25426-1] c 25 N83-10126
- Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187
- Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176
- Alkaline battery containing a separator of a cross-linked copolymer of vinyl alcohol and unsaturated carboxylic acid  
[NASA-CASE-LEW-13102-1] c 33 N85-29144
- SEQUENCING**
- Synchronous counter Patent  
[NASA-CASE-XGS-02440] c 08 N71-19432
- Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418
- Digital function generator  
[NASA-CASE-NPO-11104] c 08 N72-22165
- MOD 2 sequential function generator for multibit binary sequence  
[NASA-CASE-NPO-10636] c 08 N72-25210
- Pseudonoise sequence generators with three tap linear feedback shift registers  
[NASA-CASE-NPO-11406] c 08 N73-12175
- Mechanical sequencer  
[NASA-CASE-MS-C-19536-1] c 37 N77-22482
- Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-15670-1] c 33 N82-33634
- SEQUENTIAL ANALYSIS**
- Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209
- Event sequence detector  
[NASA-CASE-NPO-11703-1] c 10 N73-32144
- SEQUENTIAL COMPUTERS**
- Digital data reformatter/deserializer  
[NASA-CASE-NPO-13676-1] c 60 N79-20751
- SEQUENTIAL CONTROL**
- Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c 08 N71-12503
- Binary sequence detector Patent  
[NASA-CASE-XNP-05415] c 08 N71-12505
- Sequencing device utilizing planetary gear set  
[NASA-CASE-MS-C-19514-1] c 37 N79-20377
- Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884
- Nanosequencer digital logic controller  
[NASA-CASE-NPO-16116-1] c 60 N84-25306
- SERUMS**
- Reduction of blood serum cholesterol  
[NASA-CASE-NPO-12119-1] c 52 N75-15270
- SERVICE LIFE**
- Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-10503-1] c 09 N72-21248
- Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574
- Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560
- SERVOAMPLIFIERS**
- Pneumatic amplifier Patent  
[NASA-CASE-MS-C-12121-1] c 15 N71-27147
- SERVOCONTROL**
- Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460
- Proportional controller Patent  
[NASA-CASE-XAC-03392] c 03 N70-41954
- Light intensity modulator controller Patent  
[NASA-CASE-XMS-04300] c 09 N71-19479
- Strain coupled servo control system Patent  
[NASA-CASE-XLA-08530] c 32 N71-25360
- Energy limiter for hydraulic actuators Patent  
[NASA-CASE-ARC-10131-1] c 15 N71-27754
- Digital servo controller --- for rotating antenna shaft  
[NASA-CASE-KSC-10769-1] c 33 N74-29556
- Digital servo control of random sound test excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c 71 N74-31148
- Phase-locked servo system --- for synchronizing the rotation of slip ring assembly  
[NASA-CASE-MFS-22073-1] c 33 N75-13139
- Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123
- Autonomous navigation system --- gyroscopic pendulum for air navigation  
[NASA-CASE-ARC-11257-1] c 04 N81-21047
- System and method for moving a probe to follow movements of tissue  
[NASA-CASE-NPO-15197-1] c 52 N83-25346
- Control system for an induction motor with energy recovery  
[NASA-CASE-MFS-25477-1] c 33 N84-14424
- Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19604
- SERVOMECHANISMS**
- Interferometer servo system Patent  
[NASA-CASE-NPO-10300] c 14 N71-17662
- Line following servosystem Patent  
[NASA-CASE-XAC-00001] c 15 N71-28952
- A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c 07 N71-33613
- Ball screw linear actuator  
[NASA-CASE-NPO-11222] c 15 N72-25456
- Rotary actuator  
[NASA-CASE-NPO-10680] c 31 N73-14855
- Hydraulic drain means for servo-systems  
[NASA-CASE-NPO-10316-1] c 37 N77-22479
- Actuator mechanism  
[NASA-CASE-GSC-11883-2] c 37 N78-31426
- Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c 35 N79-14348
- Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407
- Electrical servo actuator bracket --- fuel control valves on jet engines  
[NASA-CASE-FRC-11044-1] c 37 N81-33483
- Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205
- Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N83-18975



- Universal clamp  
[NASA-CASE-MSC-20549-1] c 37 N86-19612
- SERVOMOTORS**  
Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433  
Transistor servo system including a unique differential amplifier circuit Patent  
[NASA-CASE-XMF-05195] c 10 N71-24861  
Cyclically operable optical shutter  
[NASA-CASE-NPO-10758] c 14 N73-14427  
Rotary actuator  
[NASA-CASE-NPO-10680] c 31 N73-14855  
Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c 35 N80-20563  
Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27829
- SEWAGE TREATMENT**  
Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634  
Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- SHADES**  
Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N86-20803
- SHAFTS (MACHINE ELEMENTS)**  
Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505  
Elastic universal joint Patent  
[NASA-CASE-XNP-00418] c 15 N70-36947  
Apparatus for absorbing and measuring power Patent  
[NASA-CASE-XLE-00720] c 14 N70-40201  
Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073  
Ratchet mechanism Patent  
[NASA-CASE-MFS-12805] c 15 N71-17805  
Frictionless universal joint Patent  
[NASA-CASE-NPO-10646] c 15 N71-28467  
Spiral groove seal  
[NASA-CASE-XLE-10326-2] c 15 N72-29488  
High speed hybrid bearing comprising a fluid bearing and a rolling bearing connected in series  
[NASA-CASE-LEW-11152-1] c 15 N73-32359  
Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c 37 N74-10474  
Hole cutter --- drill bits and rotating shaft  
[NASA-CASE-MFS-22649-1] c 37 N75-25186  
Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404  
Counter pumping debris excluder and separator --- gas turbine shaft seals  
[NASA-CASE-LEW-11855-1] c 07 N78-25090  
Sequencing device utilizing planetary gear set  
[NASA-CASE-MSC-19514-1] c 37 N79-20377  
Shaft seal assembly for high speed and high pressure applications  
[NASA-CASE-LEW-11873-1] c 37 N79-22475  
Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364  
Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370  
Circumferential shaft seal  
[NASA-CASE-LEW-12119-2] c 37 N81-26447  
Hermetic seal for a shaft  
[NASA-CASE-NPO-15115-1] c 37 N82-24493  
Angular measurement system  
[NASA-CASE-MFS-25825-1] c 35 N85-20298  
Method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-2] c 37 N85-29282  
Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N85-29290  
Angular measurement system  
[NASA-CASE-MFS-25825-1] c 31 N86-29055
- SHAKERS**  
Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1-CU] c 35 N86-26596
- SHALE OIL**  
In-situ laser retorting of oil shale  
[NASA-CASE-LEW-12217-1] c 43 N78-14452  
Oil shale extraction using super-critical extraction  
[NASA-CASE-NPO-15656-1] c 43 N84-23012  
Solar heated oil shale pyrolysis process  
[NASA-CASE-NPO-16392-1] c 25 N86-25428
- SHALES**  
Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443  
Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423  
Coal-shale interface detector  
[NASA-CASE-MFS-23720-1] c 43 N80-23711
- Oil shale extraction using super-critical extraction  
[NASA-CASE-NPO-15656-1] c 43 N84-23012
- SHAPE CONTROL**  
Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789
- SHAPE MEMORY ALLOYS**  
Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N83-36484  
Memory metal actuator  
[NASA-CASE-NPO-15960-1] c 37 N86-19804
- SHAPED CHARGES**  
Coupling for linear shaped charge Patent  
[NASA-CASE-XLA-00189] c 33 N70-36846  
Lateral displacement system for separated rocket stages Patent  
[NASA-CASE-XLA-04804] c 31 N71-23008
- SHAPERS**  
Mandrel for shaping solid propellant rocket fuel into a motor casing Patent  
[NASA-CASE-XLA-00304] c 27 N70-34783  
Tube dimpling tool Patent  
[NASA-CASE-XMS-06876] c 15 N71-21536  
Dielectric molding apparatus Patent  
[NASA-CASE-LAR-10121-1] c 15 N71-26721
- SHARKS**  
Process for conditioning tanned sharkskin and articles made therefrom Patent  
[NASA-CASE-XMS-09691-1] c 18 N71-15545
- SHARPNESS**  
Method of forming a sharp edge on an optical device  
[NASA-CASE-GSC-12348-1] c 74 N80-24149
- SHEAR CREEP**  
Instrument for measuring torsional creep and recovery Patent  
[NASA-CASE-XLE-01481] c 14 N71-10781
- SHEAR FLOW**  
Shear modulated fluid amplifier Patent  
[NASA-CASE-MFS-10412] c 12 N71-17578
- SHEAR PROPERTIES**  
Parallel plate viscometer Patent  
[NASA-CASE-XNP-09462] c 14 N71-17584
- SHEAR STRESS**  
Fatigue-resistant shear pin  
[NASA-CASE-XLA-09122] c 15 N69-27505  
Angular velocity and acceleration measuring apparatus  
[NASA-CASE-ERC-10292] c 14 N72-25410  
Bonded joint and method --- for reducing peak shear stress in adhesive bonds  
[NASA-CASE-LAR-10800-1] c 37 N74-23064
- SHEARING**  
Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900
- SHELL ANODES**  
Ring-cusp ion thruster with shell anode  
[NASA-CASE-LEW-13681-1] c 20 N85-21256
- SHELLS (STRUCTURAL FORMS)**  
Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860
- SHIELDING**  
Spherical shield Patent  
[NASA-CASE-XNP-01855] c 15 N71-28937  
Shielded flat cable  
[NASA-CASE-MFS-13687-2] c 09 N72-22198  
System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865
- SHIFT REGISTERS**  
Binary to binary-coded-decimal converter Patent  
[NASA-CASE-XNP-00432] c 08 N70-35423  
Linear three-tap feedback shift register Patent  
[NASA-CASE-NPO-10351] c 08 N71-12503  
Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897  
Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199  
Feedback shift register with states decomposed into cycles of equal length  
[NASA-CASE-NPO-11082] c 08 N72-22167  
MOD 2 sequential function generator for multibit binary sequence  
[NASA-CASE-NPO-10636] c 08 N72-25210  
Pseudonoise sequence generators with three tap linear feedback shift registers  
[NASA-CASE-NPO-11406] c 08 N73-12175  
A m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c 10 N73-20254  
Counting digital filters  
[NASA-CASE-NPO-11821-1] c 08 N73-26175  
Event sequence detector  
[NASA-CASE-NPO-11703-1] c 10 N73-32144
- Method and apparatus for decoding compatible convolutional codes  
[NASA-CASE-MSC-14070-1] c 32 N74-32596  
Nonlinear nonsingular feedback shift registers  
[NASA-CASE-NPO-13451-1] c 33 N78-14373  
Selective data segment monitoring system --- using shift registers  
[NASA-CASE-ARC-10899-1] c 60 N77-19760  
Digital data reformatter/deserializer  
[NASA-CASE-NPO-13678-1] c 60 N79-20751
- SHOCK ABSORBERS**  
Pivotal shock absorbing pad assembly Patent  
[NASA-CASE-XMF-03856] c 31 N70-34159  
Frangible tube energy dissipation Patent  
[NASA-CASE-XLA-00754] c 15 N70-34850  
Shock absorbing support and restraint means Patent  
[NASA-CASE-XMS-01240] c 05 N70-35152  
Energy absorbing structure Patent Application  
[NASA-CASE-MSC-12279-1] c 15 N70-35679  
Landing pad assembly for aerospace vehicles Patent  
[NASA-CASE-XMF-02853] c 31 N70-36654  
Space craft soft landing system Patent  
[NASA-CASE-XMF-02108] c 31 N70-36845  
Double-acting shock absorber Patent  
[NASA-CASE-XMF-01045] c 15 N70-40354  
Articulated multiple couch assembly Patent  
[NASA-CASE-MSC-11253] c 05 N71-12343  
Shock absorber Patent  
[NASA-CASE-XMS-03722] c 15 N71-21530  
Impact energy absorber Patent  
[NASA-CASE-XLA-01530] c 14 N71-23092  
Low onset rate energy absorber  
[NASA-CASE-MSC-12279] c 15 N72-17450  
Impact energy absorbing system utilizing fractureable material  
[NASA-CASE-NPO-10671] c 15 N72-20443  
Translatory shock absorber for attitude sensors  
[NASA-CASE-MFS-22905-1] c 19 N78-22284  
Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c 37 N79-10420  
Variable response load limiting device --- for aircraft seats  
[NASA-CASE-LAR-12801-1] c 37 N82-20544
- SHOCK LOADS**  
Wind tunnel model damper Patent  
[NASA-CASE-XLA-09480] c 11 N71-33612
- SHOCK MEASURING INSTRUMENTS**  
Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c 35 N78-18390
- SHOCK RESISTANCE**  
Method and apparatus for shock protection Patent  
[NASA-CASE-XLA-00482] c 15 N70-36409  
Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584  
Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206  
Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996  
Improved impact tolerant material  
[NASA-CASE-LAR-12887-1] c 24 N84-20649  
Method of fabricating an abradable gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957
- SHOCK TUBES**  
Means for controlling rupture of shock tube diaphragms Patent  
[NASA-CASE-XAC-00731] c 11 N71-15960  
Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c 11 N72-22245  
Annular arc accelerator shock tube  
[NASA-CASE-NPO-13528-1] c 09 N77-10071
- SHOCK WAVE INTERACTION**  
Absorptive splitter for closely spaced supersonic engine air inlets Patent  
[NASA-CASE-XLA-02865] c 28 N71-15563
- SHOCK WAVE LUMINESCENCE**  
Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896
- SHOCK WAVE PROFILES**  
Shock-layer radiation measurement  
[NASA-CASE-XAC-02970] c 14 N69-39896  
Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft  
[NASA-CASE-FRC-11072-1] c 05 N83-27975
- SHOCK WAVES**  
Shock tube powder dispersing apparatus Patent  
[NASA-CASE-XLE-04946] c 17 N71-24911  
Shock wave convergence apparatus  
[NASA-CASE-MFS-20890] c 14 N72-22439  
Synthesis of superconducting compounds by explosive compaction of powders  
[NASA-CASE-MFS-20861-1] c 18 N73-32437  
Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11915-1] c 35 N76-14431

## SHOES

- Jet shoes  
[NASA-CASE-XLA-08491] c 05 N69-21380

## SHORT CIRCUITS

- Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146
- Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898
- Analog to digital converter tester Patent  
[NASA-CASE-XLA-06713] c 14 N71-28991
- Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193
- Test apparatus for locating shorts during assembly of electrical buses  
[NASA-CASE-ARC-11116-1] c 33 N82-24420

## SHOT PEENING

- Method of peening and portable peening gun  
[NASA-CASE-MFS-23047-1] c 37 N76-18454

## SHOULDERS

- Shoulder and hip joint for hard space suits and the like  
[NASA-CASE-ARC-11543-1] c 54 N85-21986
- Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620
- Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507

## SHROUDED NOZZLES

- Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c 07 N78-27121

## SHROUDED TURBINES

- Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318
- Gas path seal  
[NASA-CASE-NPO-12131-3] c 37 N80-18400
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996
- Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N86-32740

## SHROUDS

- Composite powerplant and shroud therefor Patent  
[NASA-CASE-XLA-01043] c 28 N71-10780
- Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540
- Active clearance control system for a turbomachine  
[NASA-CASE-LEW-12938-1] c 07 N82-32366
- Method of fabricating an abrasible gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957
- Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N86-32740

## SHUTTERS

- High speed shutter --- electrically actuated ribbon loop for shuttering optical or fluid passageways  
[NASA-CASE-ARC-10516-1] c 70 N74-21300

## SHUTTLE DERIVED VEHICLES

- Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787

## SIDE INLETS

- Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288

## SIDE BANDS

- Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680
- Method and means for generation of tunable laser sidebands in the far-infrared region  
[NASA-CASE-NPO-16497-1-CU] c 36 N86-20779

## SIDELOBE REDUCTION

- Dual mode horn antenna Patent  
[NASA-CASE-XNP-01057] c 07 N71-15907
- Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304

## SIGNAL ANALYSIS

- Signal detection and tracking apparatus Patent  
[NASA-CASE-XGS-03502] c 10 N71-20852
- Method and apparatus for a single channel digital communications system --- synchronization of received PCM signal by digital correlation with reference signal  
[NASA-CASE-NPO-11302-2] c 32 N74-10132
- Differential phase shift keyed signal resolver  
[NASA-CASE-MSC-14066-1] c 33 N74-27705
- Correlation type phase detector --- with time correlation integrator for frequency multiplexed signals  
[NASA-CASE-GSC-11744-1] c 33 N75-26243

- Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c 32 N76-31372
- Digital plus analog output encoder  
[NASA-CASE-GSC-12115-1] c 62 N76-31946
- Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c 32 N83-13323
- Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304

## SIGNAL ANALYZERS

- System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39885
- Sampled data controller Patent  
[NASA-CASE-GSC-10554-1] c 08 N71-29033
- Family of frequency to amplitude converters  
[NASA-CASE-MSC-12395] c 09 N72-25257
- Apparatus for statistical time-series analysis of electrical signals  
[NASA-CASE-MSC-12428-1] c 10 N73-25240
- Pulse stretcher for narrow pulses  
[NASA-CASE-MSC-14130-1] c 33 N74-32711
- Electronic optical transfer function analyzer  
[NASA-CASE-MFS-21672-1] c 74 N76-19935
- Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309

## SIGNAL DETECTION

- Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958
- Method of detecting impending saturation of magnetic cores  
[NASA-CASE-ERC-10089] c 23 N72-17747
- Anti-multipath digital signal detector  
[NASA-CASE-LAR-11827-1] c 32 N77-10392
- Multiple rate digital command detection system with range clean-up capability  
[NASA-CASE-NPO-13753-1] c 32 N77-20289
- Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c 32 N79-10262
- Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313
- Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MSC-16170-2] c 32 N84-27952

## SIGNAL DETECTORS

- Surface roughness detector Patent  
[NASA-CASE-XLA-00203] c 14 N70-34161
- Pulse amplitude and width detector Patent  
[NASA-CASE-XMF-06519] c 09 N71-12519
- System for monitoring the presence of neutrals in a stream of ions Patent  
[NASA-CASE-XNP-02592] c 24 N71-20518
- Digital modulator and demodulator Patent  
[NASA-CASE-ERC-10041] c 08 N71-29138
- Coal-shale interface detection system  
[NASA-CASE-MFS-23720-2] c 43 N80-14423
- Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969
- Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c 35 N81-19427
- Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190

## SIGNAL DISTORTION

- Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249

## SIGNAL ENCODING

- Adaptive compression of communication signals Patent  
[NASA-CASE-XLA-03076] c 07 N71-11266
- Self-calibrating threshold detector  
[NASA-CASE-MSC-16370-1] c 35 N81-19427
- Random digital encryption secure communication system  
[NASA-CASE-MSC-16462-1] c 32 N82-31583

## SIGNAL GENERATORS

- Plural recorder system  
[NASA-CASE-XMS-06949] c 09 N69-21467
- Signal generator  
[NASA-CASE-XNP-05612] c 09 N69-21468
- Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281
- Array phasing device Patent  
[NASA-CASE-ERC-10046] c 10 N71-18722
- Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174
- Controllers Patent  
[NASA-CASE-XMS-07487] c 15 N71-23255
- Signal ratio system utilizing voltage controlled oscillators Patent  
[NASA-CASE-XMF-04367] c 09 N71-23545
- Signal processing apparatus for multiplex transmission Patent  
[NASA-CASE-NPO-10388] c 07 N71-24622

- Multialarm summary alarm Patent  
[NASA-CASE-XLE-03061-1] c 10 N71-24798
- Adaptive system and method for signal generation Patent  
[NASA-CASE-GSC-11367] c 10 N71-26374
- Voltage dropout sensor Patent  
[NASA-CASE-KSC-10020] c 10 N71-27338
- System for controlling the operation of a variable signal device  
[NASA-CASE-NPO-11064] c 07 N72-11150
- Digital function generator  
[NASA-CASE-NPO-11104] c 08 N72-22165
- Hall effect transducer  
[NASA-CASE-LAR-10620-1] c 09 N72-25255
- Gunn-type solid state devices  
[NASA-CASE-XER-07895] c 26 N72-25679
- Audio frequency marker system  
[NASA-CASE-NPO-11147] c 14 N72-27408
- Digital servo control of random sound test excitation --- in reverberant acoustic chamber  
[NASA-CASE-NPO-11623-1] c 71 N74-31148
- Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c 35 N75-12270
- System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519
- Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c 35 N75-21582
- NDIR gas analyzer based on absorption modulation ratios for known and unknown samples  
[NASA-CASE-ARC-10802-1] c 35 N75-30502
- Twin-capacitive shaft angle encoder with analog output signal  
[NASA-CASE-ARC-10897-1] c 33 N77-31404
- Apparatus for providing a servo drive signal in a high-speed stepping interferometer  
[NASA-CASE-NPO-13569-2] c 35 N79-14348
- Versatile LDV burst simulator  
[NASA-CASE-LAR-11859-1] c 35 N79-14349
- Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c 46 N79-23555
- Frequency translating phase conjugation circuit for active retrodirective antenna array --- microwave transmission  
[NASA-CASE-NPO-14536-1] c 32 N81-14185
- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116
- Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360
- Combinational logic for generating gate drive signals for phase control rectifiers  
[NASA-CASE-MFS-25208-1] c 33 N83-10345
- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953
- Magnetic heading reference  
[NASA-CASE-LAR-12638-1] c 04 N84-14132
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- Method and means for generation of tunable laser sidebands in the far-infrared region  
[NASA-CASE-NPO-16497-1-CU] c 36 N86-20779

- SIGNAL MEASUREMENT**  
Amplifier for measuring low-level signals in the presence of high common mode voltage  
[NASA-CASE-MFS-25868-1] c 33 N86-20670

## SIGNAL MIXING

- Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334
- Baseband signal combiner for large aperture antenna array  
[NASA-CASE-NPO-14641-1] c 32 N81-29308

## SIGNAL PROCESSING

- Adaptive compression of communication signals Patent  
[NASA-CASE-XLA-03076] c 07 N71-11266
- Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300
- Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537
- Correlation function apparatus Patent  
[NASA-CASE-XNP-00746] c 07 N71-21476
- Sidereal frequency generator Patent  
[NASA-CASE-XGS-02610] c 14 N71-23174
- Feedback integrator with grounded capacitor Patent  
[NASA-CASE-XAC-10607] c 10 N71-23669
- Signal processing apparatus for multiplex transmission Patent  
[NASA-CASE-NPO-10388] c 07 N71-24622
- Television signal processing system Patent  
[NASA-CASE-NPO-10140] c 07 N71-24742

Electronic scanning of 2-channel monopulse patterns Patent  
[NASA-CASE-GSC-10299-1] c 09 N71-24804

Remodulator filter Patent  
[NASA-CASE-NPO-10198] c 09 N71-24806

Video sync processor Patent  
[NASA-CASE-KSC-10002] c 10 N71-25865

Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866

Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142

Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266

Digital modulator and demodulator Patent  
[NASA-CASE-ERC-10041] c 08 N71-29138

Digital pulse width selection circuit Patent  
[NASA-CASE-XLA-07788] c 09 N71-29139

Phase shift circuit apparatus  
[NASA-CASE-ARC-10269-1] c 10 N72-16172

Contourograph system for monitoring electrocardiograms  
[NASA-CASE-MS-C-13407-1] c 10 N72-20225

Recorder using selective noise filter  
[NASA-CASE-ERC-10112] c 07 N72-21119

Logarithmic function generator utilizing an exponentially varying signal in an inverse manner  
[NASA-CASE-ERC-10267] c 09 N72-23173

Flexible computer accessed telemetry  
[NASA-CASE-NPO-11358] c 07 N72-25172

Data processor with conditionally supplied clock signals  
[NASA-CASE-GSC-10975-1] c 08 N73-13187

Multichannel telemetry system  
[NASA-CASE-NPO-11572] c 07 N73-16121

Measurement system  
[NASA-CASE-MFS-20658-1] c 14 N73-30386

Digital to analog conversion apparatus  
[NASA-CASE-MS-C-12458-1] c 08 N73-32081

Fluid pressure amplifier and system  
[NASA-CASE-LAR-10868-1] c 33 N74-11050

Low level signal limiter  
[NASA-CASE-XLE-04791] c 32 N74-22096

Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625

Apparatus and method for processing Korotkov sounds --- for blood pressure measurement  
[NASA-CASE-MS-C-13999-1] c 52 N74-26626

Pulse stretcher for narrow pulses  
[NASA-CASE-MS-C-14130-1] c 33 N74-32711

Continuous Fourier transform method and apparatus --- for the analysis of simultaneous analog signal components  
[NASA-CASE-ARC-10466-1] c 60 N75-13539

Signal conditioning circuit apparatus --- with constant input impedance  
[NASA-CASE-ARC-10348-1] c 33 N75-19518

Television noise reduction device  
[NASA-CASE-MS-C-12607-1] c 32 N75-21485

Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MFS-21616-1] c 33 N75-30429

Compact bi-phase pulse coded modulation decoder  
[NASA-CASE-KSC-10834-1] c 33 N76-14371

Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c 32 N76-21366

System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c 34 N76-27517

Three phase full wave dc motor decoder  
[NASA-CASE-GSC-11824-1] c 33 N77-26386

Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c 09 N77-27131

Analog to digital converter for two-dimensional radiant energy array computers  
[NASA-CASE-GSC-11839-3] c 60 N77-32731

Hearing aid malfunction detection system  
[NASA-CASE-MS-C-14916-1] c 33 N78-10375

Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c 33 N78-25319

Quadrature demodulation  
[NASA-CASE-GSC-12137-1] c 33 N78-32338

Bit error rate measurement above and below bit rate tracking threshold  
[NASA-CASE-MS-C-12743-1] c 32 N79-10263

Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195

Electrochemical detection device --- for use in microbiology  
[NASA-CASE-LAR-11922-1] c 25 N79-24073

Scannable beam forming interferometer antenna array system  
[NASA-CASE-GSC-12365-1] c 32 N80-28578

System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584

CCD correlated quadruple sampling processor  
[NASA-CASE-NPO-14426-1] c 33 N81-27396

Interleaving device  
[NASA-CASE-GSC-12111-2] c 33 N81-29342

Reconfiguring redundancy management  
[NASA-CASE-MS-C-18498-1] c 60 N82-29013

Discriminator aided phase lock acquisition for suppressed carrier signals  
[NASA-CASE-NPO-14311-1] c 33 N82-29539

Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c 32 N83-13323

Interferometric angle monitor  
[NASA-CASE-GSC-12614-1] c 74 N83-32577

Real time pressure signal system for a rotary engine  
[NASA-CASE-LEW-13622-1] c 07 N84-22559

Digital interface for bi-directional communication between a computer and a peripheral device  
[NASA-CASE-MS-C-20258-1] c 60 N84-28492

Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651

Processing circuit with asymmetry corrector and convolutional encoder for digital data  
[NASA-CASE-MS-C-20187-1] c 33 N85-20249

Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MS-C-20821-1] c 17 N86-20466

Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348

**SIGNAL RECEPTION**

Radar ranging receiver Patent  
[NASA-CASE-XNP-00748] c 07 N70-36911

Reflectometer for receiver input impedance match measurement Patent  
[NASA-CASE-NPO-10843] c 07 N71-11267

Diversity receiving system with diversity phase lock Patent  
[NASA-CASE-XGS-01222] c 10 N71-20841

Signal detection and tracking apparatus Patent  
[NASA-CASE-XGS-03502] c 10 N71-20852

Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740] c 07 N71-23098

Decoder system Patent  
[NASA-CASE-NPO-10118] c 07 N71-24741

Antenna array phase quadrature tracking system Patent  
[NASA-CASE-MS-C-12205-1] c 07 N71-27056

Electricity measurement devices employing liquid crystalline materials  
[NASA-CASE-ERC-10275] c 26 N72-25680

Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171

Ferrofluidic solenoid  
[NASA-CASE-NPO-11738-1] c 09 N73-30185

Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391

Faraday rotation measurement method and apparatus  
[NASA-CASE-NPO-14839-1] c 35 N82-15381

A single frequency multitransmitter telemetry system  
[NASA-CASE-LAR-13006-1] c 17 N83-20995

Method and apparatus for receiving and tracking phase modulated signals  
[NASA-CASE-MS-C-16170-2] c 32 N84-27952

**SIGNAL REFLECTION**

Reflectometer for receiver input impedance match measurement Patent  
[NASA-CASE-XNP-10843] c 07 N71-11267

Reflex feed system for dual frequency antenna with frequency cutoff means  
[NASA-CASE-NPO-14022-1] c 32 N78-31321

**SIGNAL STABILIZATION**

Linear accelerator frequency control system Patent  
[NASA-CASE-XGS-05441] c 10 N71-22962

Digital modulator and demodulator Patent  
[NASA-CASE-ERC-10041] c 08 N71-29138

System for interference signal nulling by polarization adjustment  
[NASA-CASE-NPO-13140-1] c 32 N75-24982

Fiber optic transmission line stabilization apparatus and method  
[NASA-CASE-NPO-15036-1] c 74 N82-19029

**SIGNAL TO NOISE RATIOS**

System for improving signal-to-noise ratio of a communication signal Patent Application  
[NASA-CASE-MS-C-12259-1] c 07 N70-12616

Radar ranging receiver Patent  
[NASA-CASE-XNP-00748] c 07 N70-36911

Phase detector assembly Patent  
[NASA-CASE-XMF-00701] c 09 N70-40272

Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent  
[NASA-CASE-XNP-05254] c 07 N71-20791

Signal ratio system utilizing voltage controlled oscillators Patent  
[NASA-CASE-XMF-04367] c 09 N71-23545

Recorder using selective noise filter  
[NASA-CASE-ERC-10112] c 07 N72-21119

Parametric amplifiers with idler circuit feedback  
[NASA-CASE-LAR-10253-1] c 09 N72-25258

System for improving signal-to-noise ratio of a communication signal  
[NASA-CASE-MS-C-12259-2] c 07 N72-33146

Signal-to-noise ratio determination circuit  
[NASA-CASE-GSC-11239-1] c 10 N73-25241

Gated compressor, distortionless signal limiter  
[NASA-CASE-NPO-11820-1] c 32 N74-19788

**SIGNAL TRANSMISSION**

Time division multiplex system  
[NASA-CASE-XGS-05918] c 07 N69-39974

Apparatus for coupling a plurality of ungrounded circuits to a grounded circuit Patent  
[NASA-CASE-XAC-00086] c 09 N70-33182

Bi-carrier demodulator with modulation Patent  
[NASA-CASE-XMF-01160] c 07 N71-11298

Bi-polar phase detector and corrector for split phase PCM data signals Patent  
[NASA-CASE-XGS-01590] c 07 N71-12392

Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent  
[NASA-CASE-XNP-05254] c 07 N71-20791

Elimination of frequency shift in a multiplex communication system Patent  
[NASA-CASE-NPO-01306] c 07 N71-20814

Adaptive tracking notch filter system Patent  
[NASA-CASE-XMF-01892] c 10 N71-22986

Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311

Junction range finder  
[NASA-CASE-KSC-10108] c 14 N73-25461

Television multiplexing system  
[NASA-CASE-KSC-10654-1] c 07 N73-30115

Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c 33 N74-10194

Pulse code modulated signal synchronizer  
[NASA-CASE-MS-C-12462-1] c 32 N74-20809

Pulse code modulated signal synchronizer  
[NASA-CASE-MS-C-12494-1] c 32 N74-20810

Digital transmitter for data bus communications system  
[NASA-CASE-MS-C-14558-1] c 32 N75-21486

Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981

Method and apparatus for background signal reduction in opto-acoustic absorption measurement  
[NASA-CASE-NPO-13683-1] c 35 N77-14411

Automatic transponder --- measurement of the internal delay time of a transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350

Fiber optic multiplex optical transmission system  
[NASA-CASE-KSC-11047-1] c 74 N78-14889

Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310

Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186

Digital numerically controlled oscillator  
[NASA-CASE-MS-C-16747-1] c 33 N81-17349

High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191

Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546

Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MS-C-18675-1] c 32 N84-22820

**SIGNATURE ANALYSIS**

Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288

**SILANES**

Elastomeric silazane polymers and process for preparing the same Patent  
[NASA-CASE-XMF-04133] c 06 N71-20717

Process for preparation of dianilinosilanes Patent  
[NASA-CASE-XMF-06409] c 06 N71-23230

Process for preparation of high-molecular-weight polyaryloxysilanes Patent  
[NASA-CASE-XMF-08674] c 06 N71-28807

- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers [NASA-CASE-ARC-10915-2] c 27 N79-18052
- Thermal protection system [NASA-CASE-MS-C-18796-1] c 24 N82-26389
- Thermal reactor --- liquid silicon production from silane gas [NASA-CASE-NPO-14369-1] c 44 N83-10501
- Process for producing tris (n-methylamino) methylsilane [NASA-CASE-MFS-25721-1] c 25 N85-21280
- SILICA GEL**
- Gels as battery separators for soluble electrode cells [NASA-CASE-LEW-12364-1] c 44 N77-22606
- SILICA GLASS**
- Non-toxic invert analog glass compositions of high modulus [NASA-CASE-HQN-10328-2] c 27 N82-29454
- High modulus rare earth and beryllium containing silicate glass compositions --- for glass reinforcing fibers [NASA-CASE-HQN-10595-1] c 27 N82-29455
- SILICATES**
- Alkali-metal silicate protective coating [NASA-CASE-XGS-04119] c 18 N69-39979
- Alkali-metal silicate binders and methods of manufacture [NASA-CASE-GSC-12303-1] c 24 N79-31347
- SILICIDES**
- Silicide coatings for refractory metals Patent [NASA-CASE-XLE-10910] c 18 N71-29040
- Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components [NASA-CASE-LEW-11179-1] c 27 N76-16229
- SILICON**
- Method of forming thin window drifted silicon charged particle detector Patent [NASA-CASE-XLE-00808] c 24 N71-10560
- Gd or Sm doped silicon semiconductor composition Patent [NASA-CASE-XLE-10715] c 26 N71-23292
- Silicon solar cell with cover glass bonded to cell by metal pattern Patent [NASA-CASE-XLE-08569] c 03 N71-23449
- Covered silicon solar cells and method of manufacture --- with polymeric films [NASA-CASE-LEW-11065-2] c 44 N76-14600
- Method of controlling defect orientation in silicon crystal ribbon growth [NASA-CASE-NPO-13918-1] c 76 N79-11920
- Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control [NASA-CASE-NPO-14474-1] c 26 N80-14229
- Method of producing silicon --- gas phase reactor multiple injector liquid feed system [NASA-CASE-NPO-14382-1] c 31 N80-18231
- System for slicing silicon wafers [NASA-CASE-NPO-14406-1] c 37 N80-29703
- Apparatus for use in the production of ribbon-shaped crystals from a silicon melt [NASA-CASE-NPO-14297-1] c 33 N81-19389
- Scriber for silicon wafers [NASA-CASE-NPO-15539-1] c 37 N82-11469
- Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine blades and vanes [NASA-CASE-LEW-13343-1] c 27 N82-28441
- Thermal reactor --- liquid silicon production from silane gas [NASA-CASE-NPO-14369-1] c 44 N83-10501
- Process and apparatus for growing a crystal ribbon [NASA-CASE-NPO-15629-1] c 76 N84-35113
- Increased voltage photovoltaic cell [NASA-CASE-NPO-16155-1] c 44 N85-30475
- Ribbon growing method and apparatus [NASA-CASE-NPO-16306-1-CU] c 76 N85-30934
- Oxidation resistant slurry coating for carbon-based materials [NASA-CASE-LEW-13923-1] c 26 N85-35267
- Diffusion oxygen barrier coating A02/MF A01 [NASA-CASE-LAR-13474-1-SB] c 26 N86-24814
- SILICON CARBIDES**
- A method for the deposition of beta-silicon carbide by isoeptaxy [NASA-CASE-ERC-10120] c 26 N69-33482
- Production of high purity silicon carbide Patent [NASA-CASE-XLA-00158] c 26 N70-36805
- Apparatus for producing high purity silicon carbide crystals Patent [NASA-CASE-XLA-02057] c 26 N70-40015
- Process for fabricating SiC semiconductor devices [NASA-CASE-LEW-12094-1] c 76 N76-25049
- Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt [NASA-CASE-NPO-13969-1] c 76 N79-23798
- High temperature silicon carbide impregnated insulating fabrics [NASA-CASE-MS-C-18832-1] c 27 N83-18908
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- SILICON COMPOUNDS**
- Method of making a silicon semiconductor device Patent [NASA-CASE-XLE-02792] c 26 N71-10607
- Polymerizable disiloxanes having in-chain perfluoroalkyl groups [NASA-CASE-MFS-20979-2] c 06 N73-32030
- Infusible silazane polymer and process for producing same --- protective coatings [NASA-CASE-XMF-02526-1] c 27 N79-21190
- Silicon-slurry/aluminide coating --- protecting gas turbine engine vanes and blades [NASA-CASE-LEW-13343] c 26 N83-31795
- SILICON CONTROLLED RECTIFIERS**
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- Transient-compensated SCR inverter [NASA-CASE-XLA-08507] c 09 N69-39984
- Reversible ring counter employing cascaded single SCR stages Patent [NASA-CASE-XGS-01473] c 09 N71-10673
- SCR blocking pulse gate amplifier Patent [NASA-CASE-XLA-07497] c 09 N71-12514
- Combinational logic for generating gate drive signals for phase control rectifiers [NASA-CASE-MSC-25208-1] c 33 N83-10345
- SILICON DIOXIDE**
- Intermittent type silica gel adsorption refrigerator Patent [NASA-CASE-XNP-00920] c 15 N71-15906
- Nose cone mounted heat resistant antenna Patent [NASA-CASE-XMS-04312] c 07 N71-22984
- Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient [NASA-CASE-ERC-10073-1] c 24 N74-19769
- Silica reusable surface insulation [NASA-CASE-ARC-10721-1] c 27 N76-22376
- Two-component ceramic coating for silica insulation [NASA-CASE-MS-C-14270-1] c 27 N76-22377
- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings [NASA-CASE-LAR-10385-3] c 74 N78-15879
- Field effect transistor and method of construction thereof [NASA-CASE-MFS-23312-1] c 33 N78-27326
- Fibrous refractory composite insulation --- shielding reusable spacecraft [NASA-CASE-ARC-11169-1] c 24 N79-24062
- Attachment system for silica tiles --- thermal protection for space shuttle orbiter [NASA-CASE-MS-C-18741-1] c 27 N82-29456
- Pyroelectric detector arrays [NASA-CASE-LAR-12363-2] c 33 N83-24763
- Apparatus and method for heating a material in a transparent ampoule --- crystal growth [NASA-CASE-MFS-25436-1] c 27 N83-36220
- SILICON FILMS**
- A method for the deposition of beta-silicon carbide by isoeptaxy [NASA-CASE-ERC-10120] c 26 N69-33482
- Pyroelectric detector arrays [NASA-CASE-LAR-12363-1] c 35 N82-31659
- Ingot slicing machine and method [NASA-CASE-NPO-15483-1] c 37 N85-21650
- SILICON JUNCTIONS**
- Radiation resistant silicon semiconductor devices Patent [NASA-CASE-XGS-07801] c 09 N71-12513
- High band GaP 3-5 tunneling junction for silicon multijunction solar cells [NASA-CASE-NPO-16526-1CU] c 44 N86-21981
- SILICON NITRIDES**
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- Sandblasting nozzle [NASA-CASE-NPO-13823-1] c 37 N81-25371
- SILICON OXIDES**
- Three-component ceramic coating for silica insulation [NASA-CASE-MS-C-14270-2] c 27 N76-23426
- SILICON POLYMERS**
- Oxygen post-treatment of plastic surface coated with plasma polymerized silicon-containing monomers [NASA-CASE-ARC-10915-2] c 27 N79-18052
- SILICON RADIATION DETECTORS**
- Thin window, drifted silicon, charged particle detector [NASA-CASE-XLE-10529] c 14 N69-23191
- Biomedical radiation detecting probe Patent [NASA-CASE-XMS-01177] c 05 N71-19440
- Imaging X-ray spectrometer [NASA-CASE-GSC-12682-1] c 35 N84-33765
- SILICON TRANSISTORS**
- Tungsten contacts on silicon substrates [NASA-CASE-GSC-10695-1] c 09 N72-25259
- Method and apparatus for detecting surface ions on silicon diodes and transistors [NASA-CASE-ERC-10325] c 15 N72-25457
- SILICONE RESINS**
- Vacuum pressure molding technique [NASA-CASE-LAR-10073-1] c 37 N76-24575
- SILICONES**
- Silicone containing solid propellant [NASA-CASE-NPO-14477-1] c 28 N80-28536
- Structural pressure sensitive silicone adhesives [NASA-CASE-LAR-13270-1] c 27 N84-32532
- SILICONIZING**
- Method of coating carbonaceous base to prevent oxidation destruction and coated base Patent [NASA-CASE-XLA-00284] c 15 N71-16075
- SILOXANES**
- Synthesis of siloxane-containing epoxy polymers Patent [NASA-CASE-MFS-13994-1] c 06 N71-11240
- Method of producing alternating ether siloxane copolymers Patent [NASA-CASE-XMF-02584] c 06 N71-20905
- Siloxane containing epoxide compounds [NASA-CASE-MFS-13994-2] c 06 N72-25148
- Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups [NASA-CASE-MFS-20979] c 06 N72-25151
- Low outgassing polydimethylsiloxane material and preparation thereof [NASA-CASE-GSC-11358-1] c 06 N73-26100
- Thermal protection system [NASA-CASE-MS-C-18796-1] c 24 N82-26389
- Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof [NASA-CASE-LAR-13318-1] c 27 N86-21685
- SILVER**
- Method of making dry electrodes [NASA-CASE-FRC-10029-2] c 05 N72-25121
- Method for forming hermetic seals [NASA-CASE-NPO-16423-1-CU] c 37 N86-19610
- SILVER ALLOYS**
- Brazing alloy composition [NASA-CASE-XMF-06053] c 26 N75-27126
- SILVER CHLORIDES**
- Electrode for biological recording [NASA-CASE-XMS-02872] c 05 N69-21925
- Bonding graphite with fused silver chloride [NASA-CASE-XGS-00963] c 15 N69-39735
- SILVER COMPOUNDS**
- Water management system and an electrolytic cell therefor Patent [NASA-CASE-MS-C-10960-1] c 03 N71-24718
- SILVER ZINC BATTERIES**
- Electric battery and method for operating same Patent [NASA-CASE-XGS-01674] c 03 N71-29129
- Additive for zinc electrodes --- electric automobiles [NASA-CASE-LEW-13286-1] c 33 N84-14422
- SIMULATION**
- Method and apparatus for simulating gravitational forces on a living organism [NASA-CASE-MS-C-20202-1] c 54 N84-16803
- SIMULATORS**
- Method and apparatus of simulating zero gravity conditions Patent [NASA-CASE-MFS-12750] c 27 N71-16223
- Phonocardiogram simulator Patent [NASA-CASE-XKS-10804] c 05 N71-24606
- Waveform simulator Patent [NASA-CASE-NPO-10251] c 10 N71-27365
- Laser Doppler velocity simulator --- to induce frequency shift [NASA-CASE-LAR-12176-1] c 36 N80-16321
- SIMULTANEOUS EQUATIONS**
- Method and apparatus for self-calibration and phasing of array antenna [NASA-CASE-NPO-15920-1] c 33 N85-21493
- SINE SERIES**
- Electro-mechanical sine/cosine generator [NASA-CASE-LAR-10503-1] c 09 N72-21248
- Function generator for synthesizing complex vibration mode patterns [NASA-CASE-LAR-10310-1] c 10 N73-20253
- SINE WAVES**
- Waveform simulator Patent [NASA-CASE-NPO-10251] c 10 N71-27365
- Wide band doubler and sine wave quadrature generator [NASA-CASE-NPO-11133] c 10 N72-20223

Electro-mechanical sine/cosine generator  
[NASA-CASE-LAR-11389-1] c 33 N77-26387

**SINGLE CRYSTALS**  
Production of high purity silicon carbide Patent  
[NASA-CASE-XLA-00158] c 26 N70-36805  
Fabrication of single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c 09 N72-22199  
Hall effect magnetometer  
[NASA-CASE-LEW-11832-2] c 35 N75-13213  
Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements  
[NASA-CASE-LAR-11144-1] c 25 N75-26043  
Method for the preparation of inorganic single crystal and polycrystalline electronic materials  
[NASA-CASE-XLE-02545-1] c 76 N79-21910  
Growth of silicon carbide crystals on a seed while pulling silicon crystals from a melt  
[NASA-CASE-NPO-13989-1] c 76 N79-23798  
Method of making macrocrystalline or single crystal semiconductor material and products produced thereby --- epitaxial substrates using low melting materials for photovoltaic cells  
[NASA-CASE-NPO-15904-1] c 76 N83-21993  
Low stress semiconductor-insulator interface for cryogenic device applications  
[NASA-CASE-NPO-16394-1] c 76 N85-20906  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267  
Total immersion crystal growth  
[NASA-CASE-NPO-15800-2] c 76 N85-22178  
Laser Schlieren crystal monitor  
[NASA-CASE-MFS-28060-1] c 76 N85-30932  
Method of making macrocrystalline or single crystal semiconductor material  
[NASA-CASE-NPO-15904-1] c 76 N86-28760

**SINTERING**  
Condenser - Separator  
[NASA-CASE-XLA-08645] c 15 N69-21465  
Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468  
Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456  
Method of making a light weight battery plaque  
[NASA-CASE-LEW-13349-1] c 26 N84-22734

**SIZE (DIMENSIONS)**  
Apparatus for producing metal powders  
[NASA-CASE-XLE-06481-2] c 17 N72-28535  
Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N85-21987  
Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618

**SIZE DETERMINATION**  
Impact measuring technique  
[NASA-CASE-LAR-10813] c 14 N72-18282  
Small conductive particle sensor --- microfiber size determination  
[NASA-CASE-LAR-12552-1] c 35 N82-11431

**SIZE SEPARATION**  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114-2] c 15 N71-26148  
Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036  
Acoustic particle separation  
[NASA-CASE-NPO-15559-1] c 71 N85-30785

**SIZING (SHAPING)**  
Method and apparatus for precision sizing and joining of large diameter tubes Patent  
[NASA-CASE-XMF-05114] c 15 N71-17850

**SIZING SCREENS**  
Method of making screen by casting Patent  
[NASA-CASE-XLE-00953] c 15 N71-15966  
Screen particle separator  
[NASA-CASE-XNP-09770-2] c 15 N72-22483

**SKEWNESS**  
Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420  
Automatic character skew and spacing checking network --- of digital tape drive systems  
[NASA-CASE-GSC-11925-1] c 33 N76-18353

**SKID LANDINGS**  
Nose gear steering system for vehicle with main skids Patent  
[NASA-CASE-XLA-01804] c 02 N70-34160

**SKIN (ANATOMY)**  
Process for conditioning tanned sharkskin and articles made therefrom Patent  
[NASA-CASE-XMS-09691-1] c 18 N71-15545  
Percutaneous connector device  
[NASA-CASE-KSC-10849-1] c 52 N77-14738  
Medical diagnosis system and method with multispectral imaging --- depth of burns and optical density of the skin  
[NASA-CASE-NPO-14402-1] c 52 N81-27783

**SKIN (STRUCTURAL MEMBER)**  
Flexibly connected support and skin Patent  
[NASA-CASE-XLA-01027] c 31 N71-24035  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137

**SKIN FRICTION**  
Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c 06 N81-17057  
Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470  
Dual-beam skin friction interferometer  
[NASA-CASE-ARC-11354-1] c 74 N83-21949  
A two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N85-21610  
Two-axis, self-nulling skin friction balance  
[NASA-CASE-LAR-13294-1] c 35 N86-32696

**SKIN TEMPERATURE (BIOLOGY)**  
Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c 52 N77-10780

**SKIN TEMPERATURE (NON-BIOLOGICAL)**  
Heat flux measuring system Patent  
[NASA-CASE-XFR-03802] c 33 N71-23085

**SKIRTS**  
Inflatable transpiration cooled nozzle  
[NASA-CASE-MFS-20619] c 28 N72-11708

**SKY BRIGHTNESS**  
Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232

**SLEEP**  
EEG sleep analyzer and method of operation Patent  
[NASA-CASE-MSC-13282-1] c 05 N71-24729

**SLEEVES**  
Energy absorbing device Patent  
[NASA-CASE-XMF-10040] c 15 N71-22877  
System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c 37 N75-33395  
Prosthesis coupling  
[NASA-CASE-KSC-11089-1] c 52 N79-26772  
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11084-1] c 31 N81-14137

**SLENDER BODIES**  
A support technique for vertically oriented launch vehicles  
[NASA-CASE-XLA-02704] c 11 N69-21540

**SLENDER WINGS**  
Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAR-12750-1] c 02 N81-19018

**SLICING**  
Method and apparatus for slicing crystals  
[NASA-CASE-GSC-12291-1] c 76 N80-18951  
System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c 37 N80-29703  
Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469  
Workpiece positioning vise  
[NASA-CASE-GSC-12762-1] c 37 N84-28083

**SLIDING CONTACT**  
Electrical connector pin with wiping action  
[NASA-CASE-XMF-04238] c 09 N69-39734  
Continuous turning slip ring assembly Patent  
[NASA-CASE-XMF-01049] c 15 N71-23049  
Electrical rotary joint apparatus for large space structures  
[NASA-CASE-MFS-23981-1] c 07 N83-20944

**SLIDING FRICTION**  
Bearing material --- composite material with low friction surface for rolling or sliding contact  
[NASA-CASE-LEW-11930-1] c 24 N76-22309

**SLIP CASTING**  
Process of casting heavy slips Patent  
[NASA-CASE-XLE-00106] c 15 N71-16076

**SLITS**  
Slit regulated gas journal bearing Patent  
[NASA-CASE-XNP-00476] c 15 N70-38620  
Method of fabricating an object with a thin wall having a precisely shaped slit  
[NASA-CASE-LAR-10409-1] c 31 N74-21059  
Dual acting slit control mechanism  
[NASA-CASE-LAR-11370-1] c 35 N80-28686

**SLOPES**  
Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367  
Family of airfoil shapes for rotating blades --- for increased power efficiency and blade stability  
[NASA-CASE-LAR-12843-1] c 02 N84-11136

**SLOT ANTENNAS**  
Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c 07 N72-11148

Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-GSC-10183-1] c 09 N72-25247  
Circularly polarized antenna  
[NASA-CASE-ERC-10214] c 09 N72-31235  
Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864  
Horn antenna having V-shaped corrugated slots  
[NASA-CASE-LAR-11112-1] c 32 N76-15330  
Spiral slotted phased antenna array  
[NASA-CASE-MSC-18532-1] c 32 N82-27556

**SLOTS**  
Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N69-27504  
Direct lift control system Patent  
[NASA-CASE-LAR-10249-1] c 02 N71-26110  
Fine adjustment mount  
[NASA-CASE-MFS-20249] c 15 N72-11386  
Method and tool for machining a transverse slot about a bore  
[NASA-CASE-LAR-11855-1] c 37 N81-14319

**SLUDGE**  
Sewage sludge additive  
[NASA-CASE-NPO-13677-1] c 45 N82-11634

**SLURRIES**  
Silicon-slurry/aluminide coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795

**SLURRY PROPELLANTS**  
Apparatus for making a metal slurry product Patent  
[NASA-CASE-XLE-00010] c 15 N70-33382

**SMOKE**  
Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852  
Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656  
Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418  
Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178

**SODIUM CHLORIDES**  
Diffuse reflective coating  
[NASA-CASE-GSC-11214-1] c 06 N73-13128  
Separator for alkaline electric batteries and method of making  
[NASA-CASE-GSC-10018-1] c 44 N82-24644

**SODIUM VAPOR**  
Method of producing silicon --- gas phase reactor multiple injector liquid feed system  
[NASA-CASE-NPO-14382-1] c 31 N80-18231

**SOFT LANDING**  
Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861  
Space craft soft landing system Patent  
[NASA-CASE-XMF-02108] c 31 N70-36845  
Omnidirectional multiple impact landing system Patent  
[NASA-CASE-XLA-09881] c 31 N71-16085

**SOFT LANDING SPACECRAFT**  
Pivotal shock absorbing pad assembly Patent  
[NASA-CASE-XMF-03856] c 31 N70-34159

**SOIL MECHANICS**  
Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367

**SOIL MOISTURE**  
Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498

**SOIL SCIENCE**  
Soil penetrometer  
[NASA-CASE-XNP-05530] c 14 N73-32321  
System for plotting subsoil structure and method thereof  
[NASA-CASE-NPO-14191-1] c 31 N80-32584

**SOILS**  
Screen particle separator  
[NASA-CASE-XNP-09770-2] c 15 N72-22483  
Burrowing apparatus  
[NASA-CASE-XNP-07169] c 15 N73-32362  
Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529

**SOL-GEL PROCESSES**  
Alkali-metal silicate binders and methods of manufacture  
[NASA-CASE-GSC-12303-1] c 24 N79-31347

**SOLAR ACTIVITY**  
Method and apparatus for measuring solar activity and atmospheric radiation effects  
[NASA-CASE-ERC-10276] c 14 N73-26432

**SOLAR ARRAYS**  
Deployable solar cell array  
[NASA-CASE-NPO-10883] c 31 N72-22874

- Use of unilluminated solar cells as shunt diodes for a solar array c 03 N72-27053  
 [NASA-CASE-GSC-10344-1] c 03 N72-27053  
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 [NASA-CASE-GSC-10945-1] c 21 N72-31637  
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 [NASA-CASE-LEW-11069-1] c 44 N74-14784  
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 [NASA-CASE-LEW-12587-1] c 44 N77-31601  
 Hexagon solar power panel c 44 N78-27515  
 [NASA-CASE-NPO-12148-1] c 44 N78-27515  
 Solar array strip and a method for forming the same c 44 N79-17314  
 [NASA-CASE-NPO-13652-1] c 44 N79-17314  
 Closed loop solar array-ion thruster system with power control circuitry c 20 N79-20179  
 [NASA-CASE-LEW-12780-1] c 20 N79-20179  
 Bonding machine for forming a solar array strip c 44 N79-24431  
 [NASA-CASE-NPO-13652-2] c 44 N79-24431  
 Double-sided solar cell package c 44 N79-25482  
 [NASA-CASE-NPO-14199-1] c 44 N79-25482  
 Method of construction of a multi-cell solar array c 44 N79-26475  
 [NASA-CASE-MFS-23540-1] c 44 N79-26475  
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 [NASA-CASE-NPO-13652-3] c 44 N80-14474  
 Electrical rotary joint apparatus for large space structures c 07 N83-20944  
 [NASA-CASE-MFS-23981-1] c 07 N83-20944  
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 [NASA-CASE-NPO-15358-1] c 33 N83-27126  
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 [NASA-CASE-MFS-25637-1] c 44 N85-21769
- SOLAR CELLS**  
 Method for producing a solar cell having an integral protective covering c 03 N69-24267  
 [NASA-CASE-XGS-04531] c 03 N69-24267  
 Radiation direction detector including means for compensating for photocell aging Patent c 14 N70-40239  
 [NASA-CASE-XLA-00183] c 14 N70-40239  
 Attitude control for spacecraft Patent c 31 N70-41855  
 [NASA-CASE-XNP-02982] c 31 N70-41855  
 Voltage-current characteristic simulator Patent c 10 N71-10578  
 [NASA-CASE-XMS-01554] c 10 N71-10578  
 Method of making a silicon semiconductor device Patent c 26 N71-10607  
 [NASA-CASE-XLE-02792] c 26 N71-10607  
 Solar cell including second surface mirrors Patent c 03 N71-11049  
 [NASA-CASE-NPO-10109] c 03 N71-11049  
 Solar battery with interconnecting means for plural cells Patent c 03 N71-11050  
 [NASA-CASE-XNP-06506] c 03 N71-11050  
 Solar cell submodule Patent c 03 N71-11056  
 [NASA-CASE-XNP-05821] c 03 N71-11056  
 Interconnection of solar cells Patent c 03 N71-11058  
 [NASA-CASE-XGS-01475] c 03 N71-11058  
 Solar cell matrix Patent c 03 N71-19545  
 [NASA-CASE-NPO-10821] c 03 N71-19545  
 Roll-up solar array Patent c 03 N71-20273  
 [NASA-CASE-NPO-10188] c 03 N71-20273  
 Method of making electrical contact on silicon solar cell and resultant product Patent c 03 N71-20482  
 [NASA-CASE-XLE-04787] c 03 N71-20482  
 Solar cell mounting Patent c 03 N71-20895  
 [NASA-CASE-XNP-00826] c 03 N71-20895  
 Simple method of making photovoltaic junctions Patent c 09 N71-23027  
 [NASA-CASE-XNP-01960] c 09 N71-23027  
 Gd or Sm doped silicon semiconductor composition Patent c 26 N71-23292  
 [NASA-CASE-XLE-10715] c 26 N71-23292  
 Protection of serially connected solar cells against open circuits by the use of shunting diode Patent c 03 N71-23354  
 [NASA-CASE-XLE-04535] c 03 N71-23354  
 Silicon solar cell with cover glass bonded to cell by metal pattern Patent c 03 N71-23449  
 [NASA-CASE-XLE-08569] c 03 N71-23449  
 Semiconductor material and method of making same Patent c 26 N71-23654  
 [NASA-CASE-XLE-02798] c 26 N71-23654  
 Method of attaching a cover glass to a silicon solar cell Patent c 03 N71-24681  
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Sun angle calculator  
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Solar tracking system  
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Space simulator Patent  
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Solar vane actuator Patent  
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Wide angle sun sensor --- consisting of cylinder, insulation and pair of detectors  
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Particulate and solar radiation stable coating for spacecraft  
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Solar concentrator protective system  
[NASA-CASE-NPO-15662-1] c 44 N84-28204

Stable density stratification solar pond  
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Long gain length solar pumped box laser  
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High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
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Sidereal frequency generator Patent  
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**SOLAR REFLECTORS**

Foldable solar concentrator Patent  
[NASA-CASE-XLA-04622] c 03 N70-41580

Solar cell including second surface mirrors Patent  
[NASA-CASE-NPO-10109] c 03 N71-11049

Method and apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917] c 15 N71-15597

Thermal pump-compressor for space use Patent  
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Apparatus for making curved reflectors Patent  
[NASA-CASE-XLE-08917-2] c 15 N71-24836

Inorganic thermal control coatings  
[NASA-CASE-MFS-20011] c 18 N72-22566

Lightweight reflector assembly  
[NASA-CASE-NPO-13707-1] c 74 N77-28933

Primary reflector for solar energy collection systems  
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Primary reflector for solar energy collection systems and method of making same  
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**SOLAR SAILS**

Strong thin membrane structure --- solar sails  
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Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
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Plurality of photosensitive cells on a pyramidal base for planetary trackers  
[NASA-CASE-XNP-04180] c 07 N69-39736

Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395

Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678

Solar sensor having coarse and fine sensing with matched preirradiated cells and method of selecting cells Patent  
[NASA-CASE-XLA-01584] c 14 N71-23269

Sun direction detection system  
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Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c 44 N79-14526

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Sun sensing guidance system for high altitude aircraft  
[NASA-CASE-FRC-11052-1] c 04 N82-23231

Cloud cover sensor  
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Airborne tracking Sun photometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N86-21982

**SOLAR SIMULATORS**

High temperature lens construction Patent  
[NASA-CASE-XNP-04111] c 14 N71-15622

High powered arc electrodes --- producing solar simulator radiation  
[NASA-CASE-LEW-11162-1] c 33 N74-12913

**SOLAR-PUMPED LASERS**

Long gain length solar pumped box laser  
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Soldering device Patent  
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Solder flux which leaves corrosion-resistant coating Patent  
[NASA-CASE-XNP-03459-2] c 18 N71-15688

Soldering with solder flux which leaves corrosion resistant coating Patent  
[NASA-CASE-XNP-03459] c 15 N71-21078

Method of plating copper on aluminum Patent  
[NASA-CASE-XLA-08966-1] c 17 N71-25903

Resistance soldering apparatus  
[NASA-CASE-GSC-10913] c 15 N72-22491

Positive contact resistance soldering unit  
[NASA-CASE-KSC-10242] c 15 N72-23497

Bonding machine for forming a solar array strip  
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Method of coating circuit paths on printed circuit boards with solder Patent  
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Method for attaching a fused-quartz mirror to a conductive metal substrate  
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Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192

Automatic recording McLeod gauge Patent  
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Solenoid valve including guide for armature and valve member  
[NASA-CASE-GSC-10607-1] c 15 N72-20442

Remote fire stack igniter --- with solenoid-controlled valve  
[NASA-CASE-MFS-21675-1] c 25 N74-33378

Automatically operable self-leveling load table  
[NASA-CASE-MFS-22039-1] c 09 N75-12968

Self-compensating solenoid valve  
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Solenoid construction Patent  
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Drive circuit for minimizing power consumption in inductive load Patent  
[NASA-CASE-NPO-10716] c 09 N71-24892

Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly --- for use with cameras mounted in satellites  
[NASA-CASE-GSC-11560-1] c 33 N74-20861

Sprag solenoid brake --- development and operations of electrically controlled brake  
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Polymeric electrolytic hygrometer  
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[NASA-CASE-LEW-13286-1] c 33 N84-14422
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[NASA-CASE-XLE-09527] c 15 N71-17688  
Inorganic solid film lubricants Patent  
[NASA-CASE-XMF-03988] c 15 N71-21403  
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[NASA-CASE-XLE-09527-2] c 15 N71-26189  
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[NASA-CASE-XLE-00207] c 28 N70-33375  
Method of igniting solid propellants Patent  
[NASA-CASE-XLE-01988] c 27 N71-15634  
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[NASA-CASE-LAR-12018-1] c 20 N78-24275  
Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588
- SOLID PROPELLANT ROCKET ENGINES**  
Spherical solid-propellant rocket motor Patent  
[NASA-CASE-XLA-00105] c 28 N70-33331  
Mandrel for shaping solid propellant rocket fuel into a motor casing Patent  
[NASA-CASE-XLA-00304] c 27 N70-34783  
Spherically-shaped rocket motor Patent  
[NASA-CASE-XHQ-01897] c 28 N70-35381  
Propellant grain for rocket motors Patent  
[NASA-CASE-XGS-03556] c 27 N70-35534  
Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c 28 N70-38181  
Steerable solid propellant rocket motor Patent  
[NASA-CASE-XNP-00234] c 28 N70-38645  
Method of making a solid propellant rocket motor Patent  
[NASA-CASE-XLA-04126] c 28 N71-26779  
Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186  
Solid propellant rocket motor  
[NASA-CASE-XNP-03282] c 28 N72-20758  
Solid propellant rocket motor nozzle  
[NASA-CASE-NPO-11458] c 28 N72-23810  
Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784  
Space vehicle  
[NASA-CASE-MFS-22734-1] c 18 N75-19329  
Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-1349] c 20 N77-17143  
Molded composite pyrogen igniter for rocket motors --- solid propellant ignition  
[NASA-CASE-LAR-12018-1] c 20 N78-24275  
Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179  
Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588  
Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784
- SOLID PROPELLANTS**  
Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
[NASA-CASE-XMF-00923] c 28 N70-36802  
Means and method of measuring viscoelastic strain Patent  
[NASA-CASE-XNP-01153] c 32 N71-17645  
Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461  
Method of forming difunctional polyisobutylene  
[NASA-CASE-NPO-10893] c 27 N73-22710

**SOLID ROCKET BINDERS**

- Solid propellant liner Patent  
[NASA-CASE-XNP-09744] c 27 N71-16392  
Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c 28 N80-28536
- SOLID ROCKET PROPELLANTS**  
Process for preparing sterile solid propellants Patent  
[NASA-CASE-XNP-01749] c 27 N70-41897  
Burning rate control of solid propellants Patent  
[NASA-CASE-XLE-03494] c 27 N71-21819  
Hydrazinium nitroformate propellant stabilized with nitroguanidine  
[NASA-CASE-NPO-12000] c 27 N72-25699  
Hydrazinium nitroformate propellant with saturated polymeric hydrocarbon binder  
[NASA-CASE-NPO-12015] c 27 N73-16764  
Preparing oxidizer coated metal fuel particles  
[NASA-CASE-NPO-11975-1] c 28 N74-33209  
Casting propellant in rocket engine  
[NASA-CASE-LAR-11995-1] c 28 N77-10213  
Solid propellant rocket motor and method of making same  
[NASA-CASE-XLA-1349] c 20 N77-17143  
High performance ammonium nitrate propellant  
[NASA-CASE-NPO-14260-1] c 28 N79-28342  
Process for the leaching of AP from propellant  
[NASA-CASE-NPO-14109-1] c 28 N80-23471  
Silicone containing solid propellant  
[NASA-CASE-NPO-14477-1] c 28 N80-28536

**SOLID STATE**

- Solid state chemical source for ammonia beam maser Patent  
[NASA-CASE-XGS-01504] c 16 N70-41578
- SOLID STATE DEVICES**  
Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500  
Temperature compensated solid state differential amplifier Patent  
[NASA-CASE-XAC-00435] c 09 N70-35440  
Operational integrator Patent  
[NASA-CASE-NPO-10230] c 09 N71-12520  
Microwave power receiving antenna Patent  
[NASA-CASE-MFS-20333] c 09 N71-13486  
Counter and shift register Patent  
[NASA-CASE-XNP-01753] c 08 N71-22897  
Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612  
Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799  
Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490  
A solid state acoustic variable time delay line Patent  
[NASA-CASE-ERC-10032] c 10 N71-25900  
Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331  
Solid state remote circuit selector switch  
[NASA-CASE-LEW-10387] c 09 N72-22201  
RF controlled solid state switch  
[NASA-CASE-ARC-10136-1] c 09 N72-22202  
Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c 03 N72-23048  
Radiation sensitive solid state switch  
[NASA-CASE-NPO-10817-1] c 08 N73-30135  
Full wave modulator-demodulator amplifier apparatus --- for generating rectified output signal  
[NASA-CASE-FRC-10072-1] c 33 N74-14939  
Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HON-10069] c 33 N75-27251  
Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335  
Space-charge-limited solid-state triode  
[NASA-CASE-NPO-13064-1] c 33 N79-11314  
Hermetically sealable package for hybrid solid-state electronic devices and the like  
[NASA-CASE-MSC-20181-1] c 33 N82-28549  
Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538  
Self-correcting electronically scanned pressure sensor  
[NASA-CASE-LAR-12686-1] c 35 N84-14491  
Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765  
Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768
- SOLID SURFACES**  
Dye penetrant for surfaces subsequently contacted by liquid oxygen Patent  
[NASA-CASE-XMF-02221] c 18 N71-27170
- SOLID WASTES**  
Process of forming catalytic surfaces for wet oxidation reactions  
[NASA-CASE-MSC-14831-1] c 25 N78-10225

**SOLID-SOLID INTERFACES**

- Coal-shale interface detection  
[NASA-CASE-MFS-23720-3] c 43 N79-25443  
Coal-rock interface detector  
[NASA-CASE-MFS-23725-1] c 43 N79-31706
- SOLIDIFICATION**  
Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125
- SOLIDIFIED GASES**  
Cooling by conversion of para to ortho-hydrogen  
[NASA-CASE-GSC-12770-1] c 25 N83-29324
- SOLIDS FLOW**  
Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- SOLUBILITY**  
Fire resistant coating composition Patent  
[NASA-CASE-GSC-10072] c 18 N71-14014  
Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187  
Method for the preparation of thin-skinned asymmetric reverse osmosis membranes and products thereof  
[NASA-CASE-ARC-11359-1] c 51 N84-28361  
Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800
- SOLUTES**  
Specific wavelength colorimeter --- for measuring given solute concentration in test sample  
[NASA-CASE-MSC-14081-1] c 35 N74-27860
- SOLUTION**  
Polyimides containing ATBN elastomers and the process for preparing same  
[NASA-CASE-LAR-13178-1] c 27 N86-20565
- SOLUTIONS**  
Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968
- SOLVENT EXTRACTION**  
Recovery of aluminum from composite propellants  
[NASA-CASE-NPO-14110-1] c 28 N81-15119  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255
- SOLVENTS**  
Coal desulfurization --- using iron pentacarbonyl  
[NASA-CASE-NPO-14272-1] c 25 N81-33246  
Supercritical solvent coal extraction  
[NASA-CASE-NPO-15210-1] c 25 N84-22709  
Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1] c 31 N85-20154  
Process for producing tris (n-methylamino) methylsilane  
[NASA-CASE-MFS-25721-1] c 25 N85-21280  
Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800  
Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227  
Polyimides containing ATBN elastomers and the process for preparing same  
[NASA-CASE-LAR-13178-1] c 27 N86-20565
- SONAR**  
Method for shaping and aiming narrow beams --- sonar mapping and target identification  
[NASA-CASE-NPO-14632-1] c 32 N82-18443  
Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376
- SONIC BOOMS**  
Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614  
Instrumentation for measuring aircraft noise and sonic boom  
[NASA-CASE-LAR-11476-1] c 07 N76-27232
- SORBATES**  
Apparatus for measuring a sorbate dispersed in a fluid stream  
[NASA-CASE-ARC-10896-1] c 35 N78-19465
- SORET COEFFICIENT**  
Method of growing composites of the type exhibiting the Soret effect --- improved structure of eutectic alloy crystals  
[NASA-CASE-MFS-22926-1] c 24 N77-27187
- SOUND GENERATORS**  
Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c 35 N74-16135  
Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846  
Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104

**SOUND LOCALIZATION**

Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c 71 N79-23753

**SOUND PRESSURE**

Instrumentation for measurement of aircraft noise and sonic boom  
[NASA-CASE-LAR-11173-1] c 35 N75-19614

Differential sound level meter  
[NASA-CASE-LAR-12106-1] c 71 N78-14867

**SOUND PROPAGATION**

System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584

**SOUND RANGING**

Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376

**SOUND TRANSDUCERS**

Method for detecting hydrogen gas  
[NASA-CASE-XMF-03873] c 06 N69-39733

Cosmic dust sensor  
[NASA-CASE-GSC-10503-1] c 14 N72-20381

Resolution enhanced sound detecting apparatus  
[NASA-CASE-NPO-14134-1] c 71 N79-23753

Pulse transducer with artifact signal attenuator --- heart rate sensors  
[NASA-CASE-FRC-11012-1] c 52 N80-23969

Acoustic system for material transport  
[NASA-CASE-NPO-15453-1] c 71 N83-32515

Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752

**SOUND WAVES**

Phonocardiograph transducer Patent  
[NASA-CASE-XMS-05365] c 14 N71-22993

Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c 12 N75-24774

Acoustic energy shaping  
[NASA-CASE-NPO-13802-1] c 71 N78-10837

Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c 71 N79-20827

Acoustic bubble removal method  
[NASA-CASE-NPO-15334-1] c 71 N83-35781

Acoustic ground impedance meter  
[NASA-CASE-LAR-12995-1] c 35 N84-22933

Acoustic rotation control  
[NASA-CASE-NPO-15689-1] c 71 N84-23233

Acoustic agglomeration methods and apparatus  
[NASA-CASE-NPO-15466-1] c 71 N85-22104

Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282

Acoustic particle separation  
[NASA-CASE-NPO-15559-1] c 71 N85-30765

Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N86-22307

**SOUNDING ROCKETS**

Attitude control system for sounding rockets Patent  
[NASA-CASE-XGS-01654] c 31 N71-24750

Method and system for ejecting fairing sections from a rocket vehicle  
[NASA-CASE-GSC-10590-1] c 31 N73-14853

**SPACE CAPSULES**

Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410

Space capsule Patent  
[NASA-CASE-XLA-01332] c 31 N71-15664

Space capsule ejection assembly Patent  
[NASA-CASE-XMF-03169] c 31 N71-15675

**SPACE CHARGE**

Space-charge-limited solid-state triode  
[NASA-CASE-NPO-13064-1] c 33 N79-11314

FET charge sensor and voltage probe  
[NASA-CASE-NPO-16045-1] c 76 N84-33211

**SPACE COMMUNICATION**

Multiple input radio receiver Patent  
[NASA-CASE-XLA-00901] c 07 N71-10775

Tracking receiver Patent  
[NASA-CASE-XGS-08679] c 10 N71-21473

Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent  
[NASA-CASE-XGS-02607] c 31 N71-23009

Space communication system for compressed data with a concatenated Reed-Solomon-Viterbi coding channel  
[NASA-CASE-NPO-13545-1] c 32 N77-12240

**SPACE ENVIRONMENT SIMULATION**

Voltage-current characteristic simulator Patent  
[NASA-CASE-XMS-01554] c 10 N71-10578

Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635

Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c 11 N71-16028

Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c 09 N71-16086

Optical characteristics measuring apparatus Patent  
[NASA-CASE-XNP-08840] c 23 N71-16365

Omni-directional anisotropic molecular trap Patent  
[NASA-CASE-XGS-00783] c 30 N71-17788

Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-18773

Mechanical simulator of low gravity conditions Patent  
[NASA-CASE-MFS-10555] c 11 N71-19494

Self-lubricating fluoride metal composite materials Patent  
[NASA-CASE-XLE-08511] c 18 N71-23710

Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c 11 N71-28629

Illumination system including a virtual light source Patent  
[NASA-CASE-HQN-10781] c 23 N71-30292

Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097

Diffuser/ejector system for a very high vacuum environment  
[NASA-CASE-MRS-25791-1] c 09 N84-27749

Variable energy, high flux, ground-state atomic oxygen source  
[NASA-CASE-NPO-16640-1-CU] c 72 N86-27055

**SPACE ERECTABLE STRUCTURES**

Flexible foam erectable space structures Patent  
[NASA-CASE-XLA-00686] c 31 N70-34135

Erectable modular space station Patent  
[NASA-CASE-XLA-00678] c 31 N70-34296

Manned space station Patent  
[NASA-CASE-XLA-00258] c 31 N70-38676

Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMF-00437] c 07 N70-40202

Passive communication satellite Patent  
[NASA-CASE-XLA-00210] c 30 N70-40309

Flexible wing deployment device Patent  
[NASA-CASE-XLA-01220] c 02 N70-41863

Capillary radiator Patent  
[NASA-CASE-XLE-03307] c 33 N71-14035

Space manufacturing machine Patent  
[NASA-CASE-MFS-20410] c 15 N71-19214

Roll-up solar array Patent  
[NASA-CASE-NPO-10188] c 03 N71-20273

Collapsible reflector Patent  
[NASA-CASE-XMS-03454] c 09 N71-20658

Inflatable support structure Patent  
[NASA-CASE-XLA-01731] c 32 N71-21045

Radiator deployment actuator Patent  
[NASA-CASE-MSC-11817-1] c 15 N71-26611

Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936

Expandable space frames  
[NASA-CASE-ERC-10365-1] c 31 N73-32749

Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c 18 N79-11108

Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c 31 N81-25258

Telescoping columns --- parabolic antenna support  
[NASA-CASE-LAR-12195-1] c 31 N81-27324

Foldable self-erecting joint --- space erectable structures  
[NASA-CASE-MSC-20635-1] c 18 N84-32424

Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605

**SPACE EXPLORATION**

Vehicle for use in planetary exploration  
[NASA-CASE-NPO-11366] c 11 N73-26238

**SPACE FLIGHT**

Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203

Television simulation for aircraft and space flight Patent  
[NASA-CASE-XFR-03107] c 09 N71-19449

**SPACE FLIGHT FEEDING**

Helmet feedport  
[NASA-CASE-XMS-09653] c 54 N78-17680

Self-charging metering and dispensing device for fluids  
[NASA-CASE-MSC-20275-1] c 35 N85-21595

**SPACE INDUSTRIALIZATION**

Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c 18 N79-11108

**SPACE MAINTENANCE**

Thruster maintenance system Patent  
[NASA-CASE-MFS-20325] c 28 N71-27095

High temperature emittance coatings and coating compositions --- repairing damaged space shuttle tiles in space  
[NASA-CASE-MSC-18851-1] c 27 N82-26460

Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323

**SPACE MANUFACTURING**

Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c 12 N75-24774

Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c 12 N76-15189

Apparatus for assembling space structure  
[NASA-CASE-MFS-23579-1] c 18 N79-11108

Structural members, method and apparatus  
[NASA-CASE-MSC-18217-1] c 31 N81-27323

Low gravity exothermic heating/cooling apparatus  
[NASA-CASE-MSC-25707-1] c 35 N85-29214

**SPACE MISSIONS**

Method of planetary atmospheric investigation using a split-trajectory dual flyby mode Patent  
[NASA-CASE-XAC-08494] c 30 N71-15990

Deep space monitor communication satellite system Patent  
[NASA-CASE-XAC-06029-1] c 31 N71-24813

A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth  
[NASA-CASE-MSC-12391] c 30 N73-12884

Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-1] c 28 N84-29017

**SPACE NAVIGATION**

Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688

Dual purpose momentum wheels for spacecraft with magnetic recording  
[NASA-CASE-NPO-11481] c 21 N73-13644

Star tracking reticles and process for the production thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630

**SPACE ORIENTATION**

Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent  
[NASA-CASE-XGS-00466] c 21 N70-34297

**SPACE PLATFORMS**

Joint for deployable structures  
[NASA-CASE-NPO-16038-1] c 37 N86-19605

Mobile remote manipulator vehicle system  
[NASA-CASE-LAR-13393-1] c 54 N86-21147

**SPACE PROBES**

Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609

**SPACE PROCESSING**

Exothermic furnace module  
[NASA-CASE-MFS-25707-1] c 35 N82-26631

High gradient directional solidification furnace  
[NASA-CASE-MFS-25963-1] c 35 N86-20750

**SPACE RENDEZVOUS**

Method and apparatus for securing to a spacecraft Patent  
[NASA-CASE-MFS-11133] c 31 N71-16222

Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605

Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669

**SPACE SHUTTLE BOOSTERS**

Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784

**SPACE SHUTTLE ORBITERS**

Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MSC-18422-1] c 37 N82-16408

High temperature emittance coatings and coating compositions --- repairing damaged space shuttle tiles in space  
[NASA-CASE-MSC-18851-1] c 27 N82-26460

CAM controlled retractable door latch  
[NASA-CASE-MSC-20304-1] c 37 N82-31690

High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448

Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323

Pre-stressed thermal protection systems  
[NASA-CASE-MSC-20254-1] c 16 N84-22601

Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784

Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886

**SPACE SHUTTLE PAYLOADS**

Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612

Shuttle-launch triangular space station  
[NASA-CASE-MSC-20676-1] c 18 N86-24729

## SPACE SHUTTLES

Flight craft Patent  
[NASA-CASE-XAC-02058] c 02 N71-16087  
A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth  
[NASA-CASE-MSC-12391] c 30 N73-12884  
Space shuttle vehicle and system  
[NASA-CASE-MSC-12433] c 31 N73-14854  
Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-12425-1] c 18 N75-27041  
Fused silicide coatings containing discrete particles for protecting niobium alloys --- used in space shuttle thermal protection systems and turbine engine components  
[NASA-CASE-LEW-11179-1] c 27 N76-16229  
Device for coupling a first vehicle to a second vehicle  
[NASA-CASE-GSC-12429-1] c 37 N81-14320  
System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724  
Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519  
Adjustable high emittance gap filler --- reentry shielding for space shuttle vehicles  
[NASA-CASE-ARC-11310-1] c 27 N82-24339  
Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991  
Slide release mechanism --- for space shuttle orbiter/external tank connection device  
[NASA-CASE-MSC-20080-1] c 37 N85-30334

**SPACE SIMULATORS**  
Space simulator Patent  
[NASA-CASE-XNP-00459] c 11 N70-38675  
Variable geometry manned orbital vehicle Patent  
[NASA-CASE-XLA-03691] c 31 N71-15674  
Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c 14 N71-30026  
Biocentrifuge system capable of exchanging specimen cages while in operational mode  
[NASA-CASE-MFS-23825-1] c 51 N81-32829

**SPACE STATIONS**  
Manned space station Patent  
[NASA-CASE-XLA-00258] c 31 N70-38676  
Meteoroid impact position locator aid for manned space station  
[NASA-CASE-LAR-10629-1] c 35 N75-33367  
Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c 15 N77-10112  
Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612

**SPACE STORAGE**  
Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991

**SPACE SUITS**  
Universal pilot restraint suit and body support therefor Patent  
[NASA-CASE-XAC-00405] c 05 N70-41819  
Space suit pressure stabilizer Patent  
[NASA-CASE-XLA-05332] c 05 N71-11194  
Equipotential space suit Patent  
[NASA-CASE-LAR-10007-1] c 05 N71-11195  
Biological isolation garment Patent  
[NASA-CASE-MSC-12206-1] c 05 N71-17599  
Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-18773  
Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439  
G conditioning suit Patent  
[NASA-CASE-XLA-02898] c 05 N71-20268  
Hard space suit Patent  
[NASA-CASE-XAC-07043] c 05 N71-23161  
Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256  
Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MSC-12109] c 18 N71-26285  
Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c 05 N71-26333  
Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c 05 N72-15098  
Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097  
Space suit having improved waist and torso movement  
[NASA-CASE-ARC-10275-1] c 05 N72-22092  
Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c 05 N73-25125  
Temperature controller for a fluid cooled garment  
[NASA-CASE-ARC-10599-1] c 05 N73-26071

Space suit  
[NASA-CASE-MSC-12609-1] c 05 N73-32012  
Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
[NASA-CASE-MSC-14331-1] c 27 N76-24405  
Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679  
Emergency space-suit helmet  
[NASA-CASE-MSC-10954-1] c 54 N78-18761  
Spacesuit mobility joints  
[NASA-CASE-ARC-11058-1] c 54 N78-31735  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736  
Cooling system for removing metabolic heat from an hermetically sealed spacesuit  
[NASA-CASE-ARC-11059-1] c 54 N78-32721  
Spacesuit mobility knee joints  
[NASA-CASE-ARC-11058-2] c 54 N79-24651  
Absorbent product to absorb fluids --- for collection of human wastes  
[NASA-CASE-MSC-18223-1] c 24 N82-29362  
Shoulder and hip joint for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N84-33021  
Elbow and knee joint for hard space suits and the like  
[NASA-CASE-ARC-11610-1] c 54 N85-20666  
Shoulder and hip joint for hard space suits and the like  
[NASA-CASE-ARC-11543-1] c 54 N85-21986  
Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N85-21987  
Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618  
Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619  
Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620  
Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507

**SPACE TOOLS**  
Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718

**SPACE TRANSPORTATION SYSTEM**  
Coupling device for moving vehicles  
[NASA-CASE-GSC-12322-1] c 37 N80-14398  
Three stage rocket vehicle with parallel staging  
[NASA-CASE-MFS-25878-1] c 18 N84-27787

**SPACE VEHICLE CHECKOUT PROGRAM**  
Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604  
Electronic checkout system for space vehicles Patent  
[NASA-CASE-XKS-08012-2] c 31 N71-15566  
High pressure gas filter system Patent  
[NASA-CASE-MFS-12806] c 14 N71-17588

**SPACEBORNE TELESCOPES**  
Anastigmatic three-mirror telescope  
[NASA-CASE-MFS-23675-1] c 89 N79-10969  
Cooled echelle grating spectrometer --- for space telescope applications  
[NASA-CASE-NPO-14372-1] c 35 N80-26635  
Extended range X-ray telescope  
[NASA-CASE-MFS-25282-1] c 34 N83-19015  
Self-indexing latch system  
[NASA-CASE-MFS-25956-1] c 37 N84-20860  
Dual aperture multispectral Schmidt objective  
[NASA-CASE-GSC-12756-1] c 74 N84-23248  
Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124

**SPACECRAFT**  
Interconnection of solar cells Patent  
[NASA-CASE-XGS-01475] c 03 N71-11058  
Altitude sensor for space vehicles Patent  
[NASA-CASE-XLA-00793] c 21 N71-22880  
Solar cell and circuit array and process for nullifying magnetic fields Patent  
[NASA-CASE-XGS-03390] c 03 N71-23187  
High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c 28 N71-28850  
Altitude simulation chamber for rocket engine testing  
[NASA-CASE-MFS-20620] c 11 N72-27262  
Space probe/satellite ejection apparatus for spacecraft  
[NASA-CASE-MFS-15429-1] c 18 N84-22609

**SPACECRAFT ANTENNAS**  
Parasitic probe antenna Patent  
[NASA-CASE-XKS-09348] c 09 N71-13521  
Millimeter wave antenna system Patent Application  
[NASA-CASE-GSC-10949-1] c 07 N71-28965  
Integrated thermoelectric generator/space antenna combination  
[NASA-CASE-XER-09521] c 09 N72-12136

Omnidirectional slot antenna for mounting on cylindrical space vehicle  
[NASA-CASE-LAR-10163-1] c 09 N72-25247  
Singly-curved reflector for use in high-gain antennas  
[NASA-CASE-NPO-11361] c 07 N72-32169  
Collapsible structure for an antenna reflector  
[NASA-CASE-NPO-11751] c 07 N73-24176  
Multi-channel rotating optical interface for data transmission  
[NASA-CASE-NPO-14066-1] c 74 N79-34011  
Antenna deployment mechanism for use with a spacecraft --- extensible and retractable telescopic antenna mast  
[NASA-CASE-GSC-12331-1] c 18 N80-14183  
Spiral slotted phased antenna array  
[NASA-CASE-MSC-18532-1] c 32 N82-27558

**SPACECRAFT CABIN ATMOSPHERES**  
Thermal control wall panel Patent  
[NASA-CASE-XLA-01243] c 33 N71-22792  
Nonflammable coating compositions --- for use in high oxygen environments  
[NASA-CASE-MFS-20486-2] c 27 N74-17283  
Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c 54 N77-32722

**SPACECRAFT COMMUNICATION**  
Time division multiplex system  
[NASA-CASE-XGS-05918] c 07 N69-39974  
Phase-shift data transmission system having a pseudo-noise SYNC code modulated with the data in a single channel Patent  
[NASA-CASE-XNP-00911] c 08 N70-41961  
Tracking receiver Patent  
[NASA-CASE-XGS-08679] c 10 N71-21473  
Omnidirectional microwave spacecraft antenna Patent  
[NASA-CASE-XLA-03114] c 09 N71-22888  
VHF/UHF parasitic probe antenna Patent  
[NASA-CASE-XKS-09340] c 07 N71-24614  
Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577  
Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864  
Switchable beamwidth monopulse method and system  
[NASA-CASE-GSC-11924-1] c 33 N76-27472  
Antenna feed system for receiving circular polarization and transmitting linear polarization  
[NASA-CASE-NPO-14362-1] c 32 N80-16261  
Common data buffer system --- communication with computational equipment utilized in spacecraft operations  
[NASA-CASE-KSC-11048-1] c 62 N81-24779  
Apparatus and method for determining the position of a radiant energy source  
[NASA-CASE-GSC-12147-1] c 32 N81-27341  
Reed-Solomon decoder --- applicable to Galileo Project requirements  
[NASA-CASE-NPO-15982-1] c 60 N85-20680  
Measurement apparatus and procedure for the determination of surface emissivities  
[NASA-CASE-LAR-13455-1] c 32 N86-24880

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Electrical connector Patent Application  
[NASA-CASE-MFS-14741] c 09 N70-20737  
Vibration damping system Patent  
[NASA-CASE-XMS-01620] c 23 N71-15673  
Intermittent type silica gel adsorption refrigerator Patent  
[NASA-CASE-XNP-00920] c 15 N71-15906  
Omni-directional anisotropic molecular trap Patent  
[NASA-CASE-XGS-00783] c 30 N71-17788  
Spacecraft airlock Patent  
[NASA-CASE-XLA-02050] c 31 N71-22968  
Docking structure for spacecraft Patent  
[NASA-CASE-XMF-05941] c 31 N71-23912  
Redundant actuating mechanism Patent  
[NASA-CASE-XGS-08718] c 15 N71-24600  
Space simulator Patent  
[NASA-CASE-NPO-10141] c 11 N71-24964  
Spacecraft Patent  
[NASA-CASE-MSC-13047-1] c 31 N71-25434  
Peak acceleration limiter for vibrational tester Patent  
[NASA-CASE-NPO-10556] c 14 N71-27185  
Solid state thermal control polymer coating Patent  
[NASA-CASE-XLA-01745] c 33 N71-28903  
Scientific experiment flexible mount  
[NASA-CASE-MSC-12372-1] c 31 N72-25842  
Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136  
Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c 18 N74-27397  
Variable ratio mixed-mode bilateral master-slave control system for shuttle remote manipulator system  
[NASA-CASE-MSC-14245-1] c 18 N75-27041

- High temperature penetrator assembly with bayonet plug and ramp-activated lock  
[NASA-CASE-MSC-19526-1] c 37 N82-24494
- Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605
- Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310
- SPACECRAFT CONFIGURATIONS**
- Inflatable honeycomb Patent  
[NASA-CASE-XLA-00204] c 32 N70-36536
- Space and atmospheric reentry vehicle Patent  
[NASA-CASE-XGS-00260] c 31 N70-37924
- Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582
- Space shuttle vehicle and system  
[NASA-CASE-MSC-12433] c 31 N73-14854
- Space vehicle  
[NASA-CASE-MFS-22734-1] c 18 N75-19329
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- Space Shuttle with rail system and aft thrust structure securing solid rocket boosters to external tank  
[NASA-CASE-MFS-25853-1] c 16 N84-27784
- SPACECRAFT CONSTRUCTION MATERIALS**
- Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996
- Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747
- Method of making a composite sandwich lattice structure  
[NASA-CASE-LAR-11898-2] c 24 N78-17149
- Fixture for environmental exposure of structural materials under compression load  
[NASA-CASE-LAR-12602-1] c 39 N83-32081
- Oxidation protecting coatings for polymers  
[NASA-CASE-LEW-14072-3] c 27 N86-26434
- SPACECRAFT CONTROL**
- Light sensitive digital aspect sensor Patent  
[NASA-CASE-XGS-00359] c 14 N70-34158
- Space vehicle attitude control Patent  
[NASA-CASE-XNP-00465] c 21 N70-35395
- Parachute glider Patent  
[NASA-CASE-XLA-00898] c 02 N70-36804
- Attitude control for spacecraft Patent  
[NASA-CASE-XNP-00294] c 21 N70-36938
- Attitude orientation of spin-stabilized space vehicles Patent  
[NASA-CASE-XLA-00281] c 21 N70-36943
- Hypersonic reentry vehicle Patent  
[NASA-CASE-XMS-04142] c 31 N70-41831
- Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c 21 N70-41856
- Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771
- Spacecraft experiment pointing and attitude control system Patent  
[NASA-CASE-XLA-05464] c 21 N71-14132
- Attitude control system Patent  
[NASA-CASE-XGS-04393] c 21 N71-14159
- Reactance control system Patent  
[NASA-CASE-XMF-01598] c 21 N71-15583
- Spacecraft attitude detection system by stellar reference Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642
- Inertial reference apparatus Patent  
[NASA-CASE-XAC-03107] c 23 N71-16098
- Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081
- Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173
- Heated porous plug microthruster  
[NASA-CASE-GSC-10640-1] c 28 N72-18766
- Flight control system  
[NASA-CASE-MSC-13397-1] c 21 N72-25595
- All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399
- Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N86-20396
- Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368
- SPACECRAFT DESIGN**
- Lunar landing flight research vehicle Patent  
[NASA-CASE-XFR-00929] c 31 N70-34966
- Space capsule Patent  
[NASA-CASE-XLA-01332] c 31 N71-15664
- Spacecraft radiator cover Patent  
[NASA-CASE-MSC-12049] c 31 N71-16080
- Method and apparatus for securing to a spacecraft Patent  
[NASA-CASE-MFS-11133] c 31 N71-16222
- Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679
- Self supporting space vehicle Patent  
[NASA-CASE-XLA-00117] c 31 N71-17680
- Multi-mission module Patent  
[NASA-CASE-XMF-01543] c 31 N71-17730
- Docking structure for spacecraft Patent  
[NASA-CASE-XMF-05941] c 31 N71-23912
- Spacecraft Patent  
[NASA-CASE-MSC-13047-1] c 31 N71-25434
- Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859
- Space vehicle  
[NASA-CASE-MFS-22734-1] c 18 N75-19329
- Space vehicle system  
[NASA-CASE-MSC-12561-1] c 18 N76-17185
- Method and apparatus for neutralizing potentials induced on spacecraft surfaces  
[NASA-CASE-GSC-11963-1] c 33 N77-10429
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- Aerospace vehicle  
[NASA-CASE-LAR-13155-1] c 05 N86-19310
- SPACECRAFT DOCKING**
- Expanding center probe and drogue Patent  
[NASA-CASE-XMS-03613] c 31 N71-16346
- Docking structure for spacecraft Patent  
[NASA-CASE-XMF-05941] c 31 N71-23912
- Latching mechanism Patent  
[NASA-CASE-MSC-15474-1] c 15 N71-26162
- Docking structure for spacecraft  
[NASA-CASE-MFS-20863] c 31 N73-26876
- Latch mechanism  
[NASA-CASE-MSC-12549-1] c 37 N74-27903
- Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c 18 N76-14186
- Multiple in-line docking capability for rotating space stations  
[NASA-CASE-MFS-20855-1] c 15 N77-10112
- Combined docking and grasping device  
[NASA-CASE-MFS-23088-1] c 37 N77-23483
- Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519
- Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303
- Apparatus for releasably connecting first and second objects in predetermined space relationship  
[NASA-CASE-MSC-18969-1] c 18 N84-22605
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N86-19613
- Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669
- SPACECRAFT ELECTRONIC EQUIPMENT**
- Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391
- Vacuum deposition apparatus Patent  
[NASA-CASE-XMF-01667] c 15 N71-17647
- Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984
- Electrical self-aligning connector --- orbital servicer vehicles  
[NASA-CASE-MFS-25211-2] c 33 N84-14423
- Space station architecture, module, berthing hub, shell assembly, berthing mechanism and utility connection channel  
[NASA-CASE-ARC-11505-1] c 18 N84-22612
- SPACECRAFT ENVIRONMENTS**
- Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203
- Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c 15 N71-17649
- Dual solid cryogenics for spacecraft refrigeration Patent  
[NASA-CASE-GSC-10188-1] c 23 N71-24725
- Dual stage check valve  
[NASA-CASE-MSC-13587-1] c 15 N73-30459
- Metering gun for dispensing precisely measured charges of fluid  
[NASA-CASE-MFS-21163-1] c 54 N74-17853
- Automatic thermal switch --- spacecraft applications  
[NASA-CASE-GSC-12553-1] c 34 N83-28356
- SPACECRAFT GUIDANCE**
- Ejection unit Patent  
[NASA-CASE-XNP-00676] c 15 N70-38996
- Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688
- Solar vane actuator Patent  
[NASA-CASE-XNP-05535] c 14 N71-23040
- Azimuth laying system Patent  
[NASA-CASE-XMF-01669] c 21 N71-23289
- Hermetic sealed vibration damper Patent  
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- Echo tracker/range finder for radars and sonars  
[NASA-CASE-NPO-14361-1] c 32 N82-23376
- SPACECRAFT INSTRUMENTS**
- Mechanical coordinate converter Patent  
[NASA-CASE-XNP-00614] c 14 N70-36907
- Air bearing Patent  
[NASA-CASE-XMF-00339] c 15 N70-39896
- Folding boom assembly Patent  
[NASA-CASE-XGS-00938] c 32 N70-41367
- Pressurized cell micrometeoroid detector Patent  
[NASA-CASE-XLA-00936] c 14 N71-14996
- Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621
- Clamping assembly for inertial components Patent  
[NASA-CASE-XMS-02184] c 15 N71-20813
- Optical projector system Patent  
[NASA-CASE-XNP-03853] c 23 N71-21882
- Combined optical attitude and altitude indicating instrument Patent  
[NASA-CASE-XLA-01907] c 14 N71-23288
- Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118
- Spacecraft attitude control method and apparatus  
[NASA-CASE-HQN-10439] c 21 N72-21624
- Pump for delivering heated fluids  
[NASA-CASE-NPO-11417] c 15 N73-24513
- Deployable pressurized cell structure for a micrometeoroid detector  
[NASA-CASE-LAR-10295-1] c 35 N74-21062
- Distributed-switch Dicke radiometers  
[NASA-CASE-GSC-12219-1] c 35 N80-18359
- Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297
- Stirling cycle cryogenic cooler  
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- Vibration isolation and pressure compensation apparatus for sensitive instrumentation  
[NASA-CASE-LAR-12728-1] c 35 N83-32026
- Optical system  
[NASA-CASE-NPO-15801-1] c 74 N85-23396
- Fully redundant mechanical release actuator  
[NASA-CASE-LAR-13198-1] c 37 N85-29287
- SPACECRAFT LANDING**
- Non-reusable kinetic energy absorber Patent  
[NASA-CASE-XLE-00810] c 15 N70-34861
- Foam generator Patent  
[NASA-CASE-XLA-00838] c 03 N70-36778
- Discrete local altitude sensing device Patent  
[NASA-CASE-XMS-03792] c 14 N70-41812
- SPACECRAFT LAUNCHING**
- Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694
- Disconnect unit  
[NASA-CASE-NPO-11330] c 33 N73-26958
- SPACECRAFT MODELS**
- Apparatus for measuring electric field strength on the surface of a model vehicle Patent  
[NASA-CASE-XLE-02038] c 09 N71-16086
- SPACECRAFT MODULES**
- Radial module space station Patent  
[NASA-CASE-XMS-01906] c 31 N70-41373
- Multi-mission module Patent  
[NASA-CASE-XMF-01543] c 31 N71-17730
- Spacecraft Patent  
[NASA-CASE-MSC-13047-1] c 31 N71-25434
- Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829
- SPACECRAFT MOTION**
- Magnetic suspension and pointing system --- on a carrier vehicle  
[NASA-CASE-LAR-11889-1] c 35 N79-26372
- SPACECRAFT POSITION INDICATORS**
- Device for determining relative angular position between a spacecraft and a radiation emitting celestial body  
[NASA-CASE-GSC-11444-1] c 14 N73-28490
- Spacecraft attitude sensor  
[NASA-CASE-GSC-10890-1] c 21 N73-30640
- SPACECRAFT POWER SUPPLIES**
- Spacecraft battery seals  
[NASA-CASE-XGS-03864] c 15 N69-24320
- Space vehicle electrical system Patent  
[NASA-CASE-XMF-00517] c 03 N70-34157
- Ionospheric battery Patent  
[NASA-CASE-XGS-01593] c 03 N70-35408

Generator for a space power system Patent  
[NASA-CASE-XLE-04250] c 09 N71-20446

Monostable multivibrator  
[NASA-CASE-GSC-10082-1] c 10 N72-20221

Stacked solar cell arrays  
[NASA-CASE-NPO-11771] c 03 N73-20040

Thermoelectric power system --- for spacecraft  
[NASA-CASE-MFS-22002-1] c 44 N76-16612

Solar energy power system  
[NASA-CASE-MFS-21628-2] c 44 N76-23675

Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254

Linear magnetic motor/generator --- to generate electric energy using magnetic flux for spacecraft power supply  
[NASA-CASE-GSC-12518-1] c 33 N82-24421

Solar driven liquid metal MHD power generator  
[NASA-CASE-LAR-12495-1] c 44 N83-28573

Bi-directional control system for energy flow in a solar powered flywheel  
[NASA-CASE-MFS-25978-1] c 44 N84-32913

Rotatable electric cable connecting system  
[NASA-CASE-GSC-12899-1] c 33 N86-20669

Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-2] c 28 N86-23744

**SPACECRAFT PROPULSION**

Colloid propulsion method and apparatus Patent  
[NASA-CASE-XLE-00817] c 28 N70-33265

Trajectory-correction propulsion system Patent  
[NASA-CASE-XNP-01104] c 28 N70-39931

Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 28 N71-23293

Voice operated controller Patent  
[NASA-CASE-XLA-04063] c 31 N71-33160

Solid propellant motor  
[NASA-CASE-NPO-11458A] c 20 N78-32179

General purpose rocket furnace  
[NASA-CASE-MFS-23460-1] c 12 N79-26075

Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364

**SPACECRAFT RADIATORS**

Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523

Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461

Radiative cooler --- spacecraft radiators  
[NASA-CASE-NPO-15465-1] c 34 N84-22903

Multi-leg heat pipe evaporator  
[NASA-CASE-MSC-20812-1] c 34 N86-27593

**SPACECRAFT RECOVERY**

Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410

Wing deployment method and apparatus Patent  
[NASA-CASE-XMS-00907] c 02 N70-41630

Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303

Apparatus and method of capturing an orbiting satellite  
[NASA-CASE-MSC-20979-1] c 37 N86-19614

**SPACECRAFT REENTRY**

Space capsule Patent  
[NASA-CASE-XLA-00149] c 31 N70-37938

Event recorder Patent  
[NASA-CASE-XLA-01832] c 14 N71-21006

**SPACECRAFT SHIELDING**

Aerodynamic protection for space flight vehicles Patent  
[NASA-CASE-XNP-02507] c 31 N71-17679

Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353

Stabilized zinc oxide coating compositions Patent  
[NASA-CASE-XMF-07770-2] c 18 N71-26772

Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c 24 N79-14156

Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c 24 N79-25142

Thermal barrier pressure seal --- shielding junctions between spacecraft control surfaces and structures  
[NASA-CASE-MSC-18134-1] c 37 N81-15363

High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
[NASA-CASE-ARC-11164-1] c 44 N83-34448

Variable anodic thermal control coating  
[NASA-CASE-LAR-12719-1] c 44 N83-34449

Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886

Mechanical fastener  
[NASA-CASE-LAR-12738-2] c 37 N85-30335

**SPACECRAFT STABILITY**

Reaction wheel scanner Patent  
[NASA-CASE-XGS-02629] c 14 N71-21082

Attitude sensor  
[NASA-CASE-LAR-10586-1] c 19 N74-15089

Annular momentum control device used for stabilization of space vehicles and the like  
[NASA-CASE-LAR-11051-1] c 15 N76-14158

Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119

Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719

Method of damping nutation motion with minimum spin axis attitude disturbance  
[NASA-CASE-GSC-12551-1] c 18 N83-28064

**SPACECRAFT STRUCTURES**

Collapsible loop antenna for space vehicle Patent  
[NASA-CASE-XMF-00437] c 07 N70-40202

Electro-optical alignment control system Patent  
[NASA-CASE-XMF-00908] c 14 N70-40238

Spacecraft radiator cover Patent  
[NASA-CASE-MSC-12049] c 31 N71-16080

Satellite appendage tie down cord Patent  
[NASA-CASE-XGS-02554] c 31 N71-21064

Thermal control panel Patent  
[NASA-CASE-XLA-07728] c 33 N71-22890

Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936

Delayed simultaneous release mechanism  
[NASA-CASE-GSC-10814-1] c 03 N73-20039

Pressurized panel  
[NASA-CASE-XLA-08916-2] c 14 N73-28487

Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c 34 N75-12222

Auger attachment method for insulation --- of spacecraft  
[NASA-CASE-MSC-12615-1] c 37 N76-19437

Particulate and solar radiation stable coating for spacecraft  
[NASA-CASE-LAR-10805-2] c 34 N77-18382

Pneumatic inflatable end effector  
[NASA-CASE-MFS-23696-1] c 54 N81-26718

Curved cap corrugated sheet  
[NASA-CASE-LAR-12884-1] c 18 N84-33450

Elastomer toughened polyimide adhesives --- bonding metal and composite material structures for aircraft and spacecraft  
[NASA-CASE-LAR-12775-2] c 27 N85-21349

**SPACECRAFT TELEVISION**

Electrically-operated rotary shutter Patent  
[NASA-CASE-XNP-00637] c 14 N70-40273

Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300

Optical conversion method --- for spacecraft television  
[NASA-CASE-MSC-12618-1] c 74 N78-17865

**SPACECRAFT TRACKING**

Ranging system Patent  
[NASA-CASE-NPO-10066] c 09 N71-18598

Deep space monitor communication satellite system Patent  
[NASA-CASE-XAC-06029-1] c 31 N71-24813

Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627

Orbital and entry tracking accessory for globes --- to provide range requirements for reentry vehicles to any landing site  
[NASA-CASE-LAR-10626-1] c 19 N74-21015

Conical scan tracking system employing a large antenna  
[NASA-CASE-NPO-14009-1] c 32 N79-13214

**SPACECREWS**

Orbital escape device Patent  
[NASA-CASE-XMS-06162] c 31 N71-28851

**SPACELAB PAYLOADS**

Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991

**SPALLATION**

Method of producing I-123 --- by bombardment of cesium causing spallation  
[NASA-CASE-LEW-11390-2] c 25 N76-27383

**SPARK CHAMBERS**

Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c 36 N82-16396

Inorganic spark chamber frame and method of making the same  
[NASA-CASE-GSC-12354-1] c 35 N82-24471

**SPARK GAPS**

Protective circuit of the spark gap type  
[NASA-CASE-XAC-08981] c 09 N69-39897

Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976

**SPARK IGNITION**

High temperature spark plug Patent  
[NASA-CASE-XLE-00660] c 28 N70-39925

Plasma igniter for internal combustion engine  
[NASA-CASE-NPO-13828-1] c 37 N79-11405

**SPARK PLUGS**

High temperature spark plug Patent  
[NASA-CASE-XLE-00660] c 28 N70-39925

**SPATIAL DISTRIBUTION**

Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339

**SPATIAL FILTERING**

Spatial filter for Q-switched lasers  
[NASA-CASE-LEW-12164-1] c 36 N77-32478

**SPATIAL RESOLUTION**

Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N85-20868

Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N86-28732

**SPECTRAL BANDS**

Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 35 N84-25016

Multispectral linear array multiband selection device  
[NASA-CASE-GSC-12911-1] c 74 N86-29650

**SPECTRAL CORRELATION**

Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705

**SPECTRAL REFLECTANCE**

Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040

**SPECTRAL SENSITIVITY**

Method and apparatus for enhancing laser absorption sensitivity  
[NASA-CASE-NPO-16567-1-CU] c 36 N86-20777

**SPECTRAL SIGNATURES**

Multispectral imaging and analysis system --- using charge coupled devices and linear arrays  
[NASA-CASE-NPO-13691-1] c 43 N79-17288

**SPECTROMETERS**

Photoelectric energy spectrometer Patent  
[NASA-CASE-XNP-04161] c 14 N71-15599

Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266

Maksutov spectrograph Patent  
[NASA-CASE-XLA-10402] c 14 N71-29041

Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-XNP-05231] c 14 N73-28491

Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c 14 N73-30392

Mossbauer spectrometer radiation detector  
[NASA-CASE-LAR-11155-1] c 35 N74-15091

Single reflector interference spectrometer and drive system therefor  
[NASA-CASE-NPO-11932-1] c 35 N74-23040

Spectrometer integrated with a facsimile camera  
[NASA-CASE-LAR-11207-1] c 35 N75-19613

Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c 33 N75-26245

Ion and electron detector for use in an ICR spectrometer  
[NASA-CASE-NPO-13479-1] c 35 N77-10492

Frequency-scanning particle size spectrometer  
[NASA-CASE-NPO-13606-2] c 35 N80-18364

Velocity servo for continuous scan Fourier interference spectrometer  
[NASA-CASE-NPO-14093-1] c 35 N80-20563

Visible and infrared polarization ratio spectrophotometer  
[NASA-CASE-LAR-12285-1] c 35 N80-28687

Portable reflectance spectrometer  
[NASA-CASE-NPO-13556-1] c 35 N84-33766

Correlation spectrometer having high resolution and multiplexing capability  
[NASA-CASE-NPO-15558-1] c 35 N84-34705

Method of fabricating an imaging X-ray spectrometer  
[NASA-CASE-GSC-12956-1] c 35 N86-20754

**SPECTROPHOTOMETERS**

Apparatus for producing three-dimensional recordings of fluorescence spectra Patent  
[NASA-CASE-XGS-01231] c 14 N70-41676

High resolution Fourier interferometer-spectrophotopolarimeter  
[NASA-CASE-NPO-13604-1] c 35 N76-31490

Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c 74 N78-17867

**SPECTRORADIOMETERS**

Compact spectroradiometer  
[NASA-CASE-HQN-10683] c 14 N71-34389

**SPECTROSCOPIC ANALYSIS**

Spectroscopic equipment using a slender cylindrical reflector as a substitute for a slit Patent  
[NASA-CASE-XGS-08269] c 23 N71-26206

## SPECTRUM ANALYSIS

- Photoelectric energy spectrometer Patent  
[NASA-CASE-XNP-04161] c 14 N71-15599
- Spectral method for monitoring atmospheric contamination of inert-gas welding shields Patent  
[NASA-CASE-XMF-02039] c 15 N71-15871
- Method and apparatus for high resolution spectral analysis  
[NASA-CASE-NPO-10748] c 08 N72-20177
- Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015

## SPECTRAL REFLECTION

- Real time reflectometer --- measurement of specular reflectance  
[NASA-CASE-MFS-23118-1] c 35 N77-31465

## SPEECH BASEBAND COMPRESSION

- Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MSC-20821-1] c 17 N86-20466

## SPEECH RECOGNITION

- Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309

## SPEED CONTROL

- System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent  
[NASA-CASE-XMF-06892] c 09 N71-24805
- Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c 11 N72-20244
- Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
[NASA CASE-MFS-20645-1] c 37 N74-23070
- Low speed phase-locked speed control system --- for brushless dc motor  
[NASA-CASE-GSC-11127-1] c 09 N75-24758
- Speed control device for a heavy duty shaft --- solar sails for spacecraft propulsion  
[NASA-CASE-NPO-14170-1] c 37 N81-15364
- Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078

## SPEED INDICATORS

- Miniature electrooptical air flow sensor  
[NASA-CASE-LAR-13065-1] c 35 N85-20295

## SPEED REGULATORS

- A dc motor speed control system Patent  
[NASA-CASE-MFS-14610] c 09 N71-28886

## SPHERES

- Guidance and maneuver analyzer Patent  
[NASA-CASE-XNP-09572] c 14 N71-15621
- Radar calibration sphere  
[NASA-CASE-XLA-11154] c 07 N72-21117
- Method of forming frozen spheres in a force-free drop tower  
[NASA-CASE-NPO-14845-1] c 27 N82-28442
- Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176
- Contactless pellet fabrication  
[NASA-CASE-NPO-15592-1] c 71 N84-16940

## SPHERICAL SHELLS

- Electrode and insulator with shielded dielectric junction  
[NASA-CASE-XLE-03778] c 09 N69-21542
- Spherical measurement device  
[NASA-CASE-XLA-06683] c 14 N72-28436

## SPHERICAL TANKS

- Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c 14 N71-21007

## SPHERICAL WAVES

- Shock wave convergence apparatus  
[NASA-CASE-MFS-20890] c 14 N72-22439

## SPHYMOGRAPHY

- Logic-controlled occlusive cuff system  
[NASA-CASE-MSC-14836-1] c 52 N82-11770

## SPIKE NOZZLES

- Aerodynamic spike nozzle Patent  
[NASA-CASE-XGS-01143] c 31 N71-15647

## SPIKE POTENTIALS

- Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393

## SPILLING

- Spillage detector for liquid chromatography systems  
[NASA-CASE-MSC-20206-1] c 25 N86-27431

## SPIN DYNAMICS

- Nutation damper  
[NASA-CASE-GSC-11205-1] c 15 N73-25513
- Stabilization of He2(a 3 Sigma u+ molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826
- Dual towline spin-recovery device  
[NASA-CASE-LAR-13076-1] c 08 N85-35200

## SPIN REDUCTION

- Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485
- Despin weight release Patent  
[NASA-CASE-XLA-00679] c 15 N70-38601

- Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c 30 N70-40016
- Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582
- Method and means for damping nutation in a satellite Patent  
[NASA-CASE-XMF-00442] c 31 N71-10747

## SPIN STABILIZATION

- Dynamic precession damper for spin stabilized vehicles Patent  
[NASA-CASE-XLA-01989] c 21 N70-34295
- Attitude orientation of spin-stabilized space vehicles Patent  
[NASA-CASE-XLA-00281] c 21 N70-36943
- Spacecraft attitude detection system by stellar reference Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642
- Cartwheel satellite synchronization system Patent  
[NASA-CASE-XGS-05578] c 31 N71-15676
- Velocity package Patent  
[NASA-CASE-XLA-01339] c 31 N71-15692
- Passive dual spin misalignment compensators --- gyro-stabilized device  
[NASA-CASE-GSC-11479-1] c 35 N74-28097
- Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft  
[NASA-CASE-LAR-10753-1] c 08 N74-30421
- Active nutation controller  
[NASA-CASE-GSC-12273-1] c 35 N80-21719
- Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130
- Scanner --- photography from a spin stabilized synchronous satellite  
[NASA-CASE-GSC-12032-2] c 43 N82-13465

## SPINDLES

- Variable contour securing system  
[NASA-CASE-MSC-16270-1] c 37 N78-27423

## SPINE

- Spine immobilization apparatus  
[NASA-CASE-ARC-11167-1] c 52 N81-25682

## SPINNERS

- Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482

## SPIRAL ANTENNAS

- Spiral slotted phased antenna array  
[NASA-CASE-MSC-18532-1] c 32 N82-27558

## SPIRAL WRAPPING

- Adjustable tension wire guide Patent  
[NASA-CASE-XMS-02383] c 15 N71-15918
- Continuous self-locking spiral wound seal --- for maintaining pressure between chambers in cryogenic wind tunnels  
[NASA-CASE-LAR-12315-1] c 37 N82-24490
- Modified spiral wound retaining ring  
[NASA-CASE-LAR-12361-1] c 37 N83-19091

## SPIRALS (CONCENTRATORS)

- Spiral groove seal --- for hydraulic rotating shaft  
[NASA-CASE-LEW-10326-3] c 37 N74-10474

## SPIROMETERS

- Balanced bellows spirometer  
[NASA-CASE-XAR-01547] c 05 N69-21473

## SPLICING

- Optimized bolted joint  
[NASA-CASE-LAR-13250-1] c 37 N86-27630

## SPLINTS

- Stretcher Patent  
[NASA-CASE-XMF-06589] c 05 N71-23159

## SPOILERS

- Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands  
[NASA-CASE-LAR-12412-1] c 08 N82-24205

## SPORES

- Lyophilized spore dispenser  
[NASA-CASE-LAR-10544-1] c 37 N74-13178

## SPOT WELDS

- Electric arc welding Patent  
[NASA-CASE-XMF-00392] c 15 N70-34814
- Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433

## SPRAY CHARACTERISTICS

- Constant-output atomizer --- Inhalation therapy and aerosol research  
[NASA-CASE-MFS-25631-1] c 34 N84-12406

## SPRAY NOZZLES

- Rocket injector head  
[NASA-CASE-XMF-04592-1] c 20 N79-21125
- Fire extinguishing apparatus having a slidable mass for a penetrator nozzle --- for penetrating aircraft and shuttle orbiter skin  
[NASA-CASE-KSC-11064-1] c 31 N81-14137
- Controlled overspray spray nozzle  
[NASA-CASE-MFS-25139-1] c 34 N82-13376

## SPRAYED COATINGS

- Method of making a diffusion bonded refractory coating Patent  
[NASA-CASE-XLE-01604-2] c 15 N71-15610
- Thermal protection ablation spray system Patent  
[NASA-CASE-XLA-04251] c 18 N71-26100
- Peen plating  
[NASA-CASE-GSC-11183-1] c 15 N73-32360
- Sprayable low density ablator and application process  
[NASA-CASE-MFS-23506-1] c 24 N78-24290
- Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492
- High temperature emittance coatings and coating compositions --- repairing damaged space shuttle tiles in space  
[NASA-CASE-MSC-18851-1] c 27 N82-26460
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N84-20670
- Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283
- Method of coating a substrate with a rapidly solidified metal  
[NASA-CASE-GSC-12880-1] c 26 N86-32550

## SPRAYERS

- External liquid-spray cooling of turbine blades Patent  
[NASA-CASE-XLE-00037] c 28 N70-33372
- Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293
- Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c 33 N71-29152
- Closed loop spray cooling apparatus --- for particle accelerator targets  
[NASA-CASE-LEW-11981-1] c 31 N78-17237
- Spray coating apparatus having a rotatable workpiece holder  
[NASA-CASE-ARC-11110-1] c 37 N82-24492
- Warm fog dissipation using large volume water sprays  
[NASA-CASE-MFS-25962-1] c 09 N84-32398
- Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MSC-18852-1] c 37 N85-29283
- Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N86-24935

## SPRAYING

- Aircraft wheel spray drag alleviator Patent  
[NASA-CASE-XLA-01583] c 02 N70-36825
- Closed loop spray cooling apparatus  
[NASA-CASE-LEW-11981-2] c 34 N79-20336
- Method and apparatus for suppressing ignition overpressure in solid rocket propulsion systems  
[NASA-CASE-MFS-25843-1] c 20 N83-17588

## SPREAD SPECTRUM TRANSMISSION

- Navigation system and method  
[NASA-CASE-GSC-12508-1] c 04 N84-22546

## SPREADING

- Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c 15 N71-10809

## SPRINGS (ELASTIC)

- Belleville spring assembly with elastic guides  
[NASA-CASE-XNP-09452] c 15 N69-27504
- Multiple Belleville spring assembly Patent  
[NASA-CASE-XNP-00840] c 15 N70-38225
- Switching mechanism with energy storage means Patent  
[NASA-CASE-XGS-00473] c 03 N70-38713
- Load cell protection device Patent  
[NASA-CASE-XMS-06782] c 32 N71-15974
- Vibration isolation system using compression springs  
[NASA-CASE-NPO-11012] c 15 N72-11391
- Spring operated accelerator and constant force spring mechanism therefor  
[NASA-CASE-ARC-10898-1] c 35 N77-18417
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834
- Rotary stepping device with memory metal actuator  
[NASA-CASE-NPO-15482-1] c 37 N83-36484
- Resilient seal ring assembly with spring means applying force to wedge member --- cryogenic applications  
[NASA-CASE-MFS-25678-1] c 37 N84-11497
- Unidirectional flexural pivot  
[NASA-CASE-GSC-12622-1] c 37 N84-12492
- Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797



## SPUTTERING

- A method for the deposition of beta-silicon carbide by isopitaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482  
Method of forming transparent films of ZnO  
[NASA-CASE-FRC-10019] c 15 N73-12487  
Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias  
[NASA-CASE-LEW-10920-1] c 17 N73-24569  
Sputtering holes with ion beamlets  
[NASA-CASE-LEW-11646-1] c 20 N74-31269  
Multitarget sequential sputtering apparatus  
[NASA-CASE-NPO-13345-1] c 37 N75-19684  
Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455  
Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415  
Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117  
Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170  
Diamondlike flake composites  
[NASA-CASE-LEW-13837-1] c 24 N84-22695  
Method of making an ion beam sputter-etched ventricular catheter for hydrocephalus shunt  
[NASA-CASE-LEW-13107-2] c 52 N84-23095  
Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565  
Textured carbon surfaces on copper  
[NASA-CASE-LEW-14130-1] c 31 N85-20156  
Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267  
Liquid crystal light valve structures  
[NASA-CASE-MS-C-20036-1] c 76 N85-33826  
Oxidation protection coatings for polymers  
[NASA-CASE-LEW-14072-1] c 27 N86-19458  
Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N86-20587  
Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587
- SQUARE WAVES**  
High speed phase detector Patent  
[NASA-CASE-XNP-01306-2] c 09 N71-24596
- SQUARES (MATHEMATICS)**  
Apparatus for computing square roots Patent  
[NASA-CASE-XGS-04768] c 08 N71-19437
- SQUEEZE FILMS**  
Dual clearance squeeze film damper  
[NASA-CASE-LEW-13506-1] c 37 N85-33490
- SQUIBS**  
Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922
- STABILITY**  
Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790  
Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266
- STABILITY AUGMENTATION**  
Velocity vector control system augmented with direct lift control  
[NASA-CASE-LAR-12268-1] c 08 N81-24106  
Leading edge flap system for aircraft control augmentation  
[NASA-CASE-LAR-12787-2] c 08 N85-19985
- STABILITY TESTS**  
Method and apparatus for checking the stability of a setup for making reflection type holograms  
[NASA-CASE-MFS-21455-1] c 35 N74-15146
- STABILIZATION**  
Ultrastable calibrated light source  
[NASA-CASE-MS-C-12293-1] c 14 N72-27411  
System for stabilizing torque between a balloon and gondola  
[NASA-CASE-GSC-11077-1] c 02 N73-13008  
Suppression of flutter  
[NASA-CASE-LAR-10682-1] c 02 N73-26004  
Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c 76 N75-25730  
Arc control in compact arc lamps  
[NASA-CASE-NPO-10870-1] c 33 N77-22386  
Self-stabilizing radial face seal  
[NASA-CASE-LEW-12991-1] c 37 N81-24442  
Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15696-1] c 33 N85-34333
- STABILIZED PLATFORMS**  
Hydraulic drive mechanism Patent  
[NASA-CASE-XMS-03252] c 15 N71-10658  
Failure detection and control means for improved drift performance of a gimbaled platform system  
[NASA-CASE-MFS-23551-1] c 04 N76-26175  
Rotary leveling base platform  
[NASA-CASE-ARC-10981-1] c 37 N78-27425

- Magnetic bearing and motor  
[NASA-CASE-GSC-12726-1] c 37 N83-34323
- STABILIZERS**  
Satellite despin device Patent  
[NASA-CASE-XMF-08523] c 31 N71-20396
- STABILIZERS (AGENTS)**  
Hydrazinium nitroformate propellant stabilized with nitroguanidine  
[NASA-CASE-NPO-12000] c 27 N72-25699
- STABILIZERS (FLUID DYNAMICS)**  
Assembly for recovering a capsule Patent  
[NASA-CASE-XMF-00641] c 31 N70-36410  
Mechanical stability augmentation system Patent  
[NASA-CASE-XLA-06339] c 02 N71-13422  
Apparatus for automatically stabilizing the attitude of a nonrigid vehicle  
[NASA-CASE-ARC-10134] c 30 N72-17873  
Life raft stabilizer  
[NASA-CASE-MS-C-12393-1] c 02 N73-26006  
Externally supported internally stabilized flexible duct joint  
[NASA-CASE-MFS-19194-1] c 37 N76-14460  
Fluidic momentum controller  
[NASA-CASE-MS-C-20906-1] c 18 N86-19344
- STABLE OSCILLATIONS**  
Amplifier drift tester  
[NASA-CASE-XMS-05562-1] c 09 N69-39986
- STACKS**  
Remote fire stack igniter --- with solenoid-controlled valve  
[NASA-CASE-MFS-21675-1] c 25 N74-33378
- STAGE SEPARATION**  
Tubular coupling having frangible connecting means  
[NASA-CASE-XLA-02854] c 15 N69-27490  
Missile stage separation indicator and stage initiator Patent  
[NASA-CASE-XLA-00791] c 03 N70-39930  
Quick release separation mechanism Patent  
[NASA-CASE-XLA-01441] c 15 N70-41679  
Spacecraft separation system for spinning vehicles and/or payloads Patent  
[NASA-CASE-XLA-02132] c 31 N71-10582  
Payload/burned-out motor case separation system Patent  
[NASA-CASE-XLA-05369] c 31 N71-15687  
Single action separation mechanism Patent  
[NASA-CASE-XLA-00188] c 15 N71-22874  
Lateral displacement system for separated rocket stages Patent  
[NASA-CASE-XLA-04804] c 31 N71-23008  
Separation simulator Patent  
[NASA-CASE-XKS-04631] c 10 N71-23663  
Frangible link  
[NASA-CASE-MS-C-11849-1] c 15 N72-22488  
Tanker orbit transfer vehicle and method  
[NASA-CASE-MS-C-20543-1] c 18 N84-22610
- STAGNATION PRESSURE**  
Traversing probe Patent  
[NASA-CASE-XFR-02007] c 12 N71-24892  
Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c 35 N74-32878
- STAGNATION TEMPERATURE**  
Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156
- STAINING**  
Automated single-slide staining device  
[NASA-CASE-LAR-11649-1] c 51 N77-27677
- STAINLESS STEELS**  
Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443  
Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c 38 N74-15130  
Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515  
Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171  
Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MS-C-18172-1] c 26 N80-19237  
Moving body velocity arresting line --- stainless steel cables with energy absorbing sleeves  
[NASA-CASE-LAR-12372-1] c 37 N82-18601
- STAMPING**  
Holding fixture for a hot stamping press  
[NASA-CASE-GSC-12619-1] c 37 N84-12491  
Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276
- STANDARDS**  
Microwave integrated circuit for Josephson voltage standards  
[NASA-CASE-MFS-23845-1] c 33 N81-17348

- Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276
- STANDING WAVES**  
Method and apparatus for shaping and enhancing acoustical levitation forces  
[NASA-CASE-MFS-25050-1] c 71 N81-15767  
Image readout device with electronically variable spatial resolution  
[NASA-CASE-LAR-12633-1] c 33 N82-24416  
Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N82-27086  
System for controlled acoustic rotation of objects  
[NASA-CASE-NPO-15522-1] c 71 N83-32516  
Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752
- STAR TRACKERS**  
Roll attitude star sensor system Patent  
[NASA-CASE-XNP-01307] c 21 N70-41856  
Sun tracker with rotatable plane-parallel plate and two photocells Patent  
[NASA-CASE-XGS-01159] c 21 N71-10678  
Canopus detector including automotive gain control of photomultiplier tube Patent  
[NASA-CASE-XNP-03914] c 21 N71-10771  
Spacecraft attitude detection system by stellar reference Patent  
[NASA-CASE-XGS-03431] c 21 N71-15642  
Reference voltage switching unit  
[NASA-CASE-NPO-11253] c 09 N72-17157  
Star tracking reticles and process for the production thereof  
[NASA-CASE-GSC-11188-2] c 21 N73-19630  
Star tracking reticles  
[NASA-CASE-GSC-11188-1] c 14 N73-32320  
Formation of star tracking reticles  
[NASA-CASE-GSC-11188-3] c 74 N74-20008  
Star scanner --- with a reticle with a pair of slits having differing separation  
[NASA-CASE-GSC-11569-1] c 89 N74-30886  
Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247
- STARK EFFECT**  
Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c 33 N75-26245  
Stark-effect modulation of CO<sub>2</sub> laser with NH<sub>2</sub>D  
[NASA-CASE-NPO-11945-1] c 36 N76-18427  
Stark cell optoacoustic detection of constituent gases in sample  
[NASA-CASE-NPO-14143-1] c 25 N81-14015  
Stark effect spectrophone for continuous absorption spectra monitoring --- a technique for gas analysis  
[NASA-CASE-NPO-15102-1] c 25 N81-25159
- STARTERS**  
Starting circuit for vapor lamps and the like Patent  
[NASA-CASE-XNP-01058] c 09 N71-12540  
Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c 33 N75-19524  
Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360
- STARTING**  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-28599
- STATIC DEFORMATION**  
Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N86-22307
- STATIC DISCHARGERS**  
Use of glow discharge in fluidized beds  
[NASA-CASE-ARC-11245-1] c 28 N82-18401
- STATIC FRICTION**  
Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995  
Static coefficient test method and apparatus  
[NASA-CASE-GSC-11893-1] c 35 N76-31489
- STATIC INVERTERS**  
Static inverters which sum a plurality of waves Patent  
[NASA-CASE-XMF-00663] c 08 N71-18752  
Static inverter Patent  
[NASA-CASE-XGS-05289] c 09 N71-19470
- STATIC LOADS**  
Instrument for measuring torsional creep and recovery Patent  
[NASA-CASE-XLE-01481] c 14 N71-10781  
Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878
- STATIC PRESSURE**  
Aerodynamic measuring device Patent  
[NASA-CASE-XLA-00481] c 14 N70-36824  
Check valve assembly for a probe Patent  
[NASA-CASE-XLA-00128] c 15 N70-37925



- Static pressure probe  
[NASA-CASE-LAR-11552-1] c 35 N76-14429
- Static pressure orifice system testing method and apparatus  
[NASA-CASE-LAR-12269-1] c 35 N80-18358
- Apparatus and method for jet noise suppression  
[NASA-CASE-LAR-11903-2] c 71 N84-14873
- STATIONKEEPING**  
Station keeping of a gravity gradient stabilized satellite Patent  
[NASA-CASE-XLA-03132] c 31 N71-22969
- STATISTICAL CORRELATION**  
Optical probing of supersonic flows with statistical correlation  
[NASA-CASE-MFS-20642] c 14 N72-21407
- STATOR BLADES**  
Stator rotor tools  
[NASA-CASE-MSC-16000-1] c 37 N78-24544
- STATORS**  
Nickel base alloy --- for gas turbine engine stator vanes  
[NASA-CASE-LEW-12270-1] c 26 N77-32280
- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834
- Brushless DC motor control system responsive to control signals generated by a computer or the like  
[NASA-CASE-NPO-16420-1] c 33 N86-20681
- Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788
- Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N86-20804
- STEADY STATE**  
Steady state thermal radiometers  
[NASA-CASE-MFS-21108-1] c 34 N74-27861
- STEAM**  
Steam cooled rich-burn combustor liner  
[NASA-CASE-LEW-13609-1] c 25 N83-17628
- STEAM TURBINES**  
Boiler for generating high quality vapor Patent  
[NASA-CASE-XLE-00785] c 33 N71-16104
- STEELS**  
Potassium silicate zinc coatings  
[NASA-CASE-GSC-10361-1] c 18 N72-23581
- Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N86-32556
- STEERABLE ANTENNAS**  
Array phasing device Patent  
[NASA-CASE-ERC-10046] c 10 N71-18722
- Satellite communication system Patent  
[NASA-CASE-XNP-02389] c 07 N71-28900
- Amplitude steered array  
[NASA-CASE-GSC-11446-1] c 33 N74-20860
- Phased array antenna control  
[NASA-CASE-MSC-14939-1] c 32 N79-11264
- STEERING**  
Steerable solid propellant rocket motor Patent  
[NASA-CASE-XNP-00234] c 28 N70-38645
- STELLAR LUMINOSITY**  
Radiant energy intensity measurement system Patent  
[NASA-CASE-XNP-06510] c 14 N71-23797
- STELLAR SPECTRA**  
Radiant energy intensity measurement system Patent  
[NASA-CASE-XNP-06510] c 14 N71-23797
- STENCIL PROCESSES**  
Method of tracing contour patterns for use in making gradual contour resin matrix composites  
[NASA-CASE-ARC-11246-1] c 31 N83-34073
- STEPPING MOTORS**  
Scanner --- photography from a spin stabilized synchronous satellite  
[NASA-CASE-GSC-12032-2] c 43 N82-13465
- STEREOPHOTOGRAPHY**  
Stereo photomicrography system  
[NASA-CASE-LAR-10176-1] c 14 N72-20380
- Optical stereo video signal processor  
[NASA-CASE-MFS-25752-1] c 74 N86-21348
- STEREOSCOPIC VISION**  
Stereoscopic television system and apparatus  
[NASA-CASE-ARC-10160-1] c 23 N72-27728
- STEREOSCOPY**  
Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920
- STERILIZATION**  
Process for preparing sterile solid propellants Patent  
[NASA-CASE-XNP-01749] c 27 N70-41897
- Processing for producing a sterilized instrument Patent  
[NASA-CASE-XNP-09763] c 14 N71-20461
- Air conditioned suit  
[NASA-CASE-LAR-10076-1] c 05 N73-20137
- Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves  
[NASA-CASE-GSC-10225-1] c 06 N73-27086
- Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761
- Portable heatable container  
[NASA-CASE-NPO-14237-1] c 44 N80-20808
- System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724
- STERILIZATION EFFECTS**  
Electrical connector  
[NASA-CASE-NPO-10694] c 09 N72-20200
- STIFFENING**  
Metal matrix composite structural panel construction  
[NASA-CASE-LAR-12807-1] c 24 N84-11214
- STIFFNESS**  
Modified face seal for positive film stiffness  
[NASA-CASE-LEW-12989-1] c 37 N82-12442
- STIMULATED EMISSION**  
Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c 16 N71-24832
- STIRLING CYCLE**  
Stirling cycle engine and refrigeration systems  
[NASA-CASE-NPO-13613-1] c 37 N76-29590
- Power control for hot gas engines  
[NASA-CASE-NPO-14220-1] c 37 N81-14318
- Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518
- Hot gas engine with dual crankshafts  
[NASA-CASE-NPO-14221-1] c 37 N81-25370
- Stirling cycle cryogenic cooler --- magnetically suspended pistons  
[NASA-CASE-GSC-12697-1] c 31 N82-11312
- Stirling cycle cryogenic cooler  
[US-PATENT-4,389,849] c 44 N83-28574
- Magnetically actuated compressor  
[NASA-CASE-GSC-12799-1] c 31 N85-21404
- STIRLING ENGINES**  
Phase-angle controller for Stirling engines  
[NASA-CASE-NPO-14388-1] c 37 N81-17432
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518
- STIRRING**  
Stirring apparatus for plural test tubes Patent  
[NASA-CASE-XAC-06956] c 15 N71-21177
- Planar oscillatory stirring apparatus  
[NASA-CASE-MFS-26002-1-CU] c 35 N86-26598
- STOICHIOMETRY**  
Sulfone-ester polymers containing pendant ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- STORAGE**  
Fluid sample collector Patent  
[NASA-CASE-XMS-06767-1] c 14 N71-20435
- Sodium storage and injection system  
[NASA-CASE-NPO-14384-1] c 37 N80-10494
- STORAGE BATTERIES**  
Bonded elastomeric seal for electrochemical cells Patent  
[NASA-CASE-XGS-02631] c 03 N71-23006
- Automatic battery charger Patent  
[NASA-CASE-XNP-04758] c 03 N71-24605
- Electric battery and method for operating same Patent  
[NASA-CASE-XGS-01674] c 03 N71-29129
- Electric storage battery  
[NASA-CASE-NPO-11021] c 03 N72-20032
- Hydrogen-bromine secondary battery  
[NASA-CASE-NPO-13237-1] c 44 N76-18641
- Rechargeable battery which combats shape change of the zinc anode  
[NASA-CASE-HQN-10862-1] c 44 N76-29699
- Electrically rechargeable REDOX flow cell  
[NASA-CASE-LEW-12220-1] c 44 N77-14581
- Formulated plastic separators for soluble electrode cells --- rubber-ion transport membranes  
[NASA-CASE-LEW-12358-1] c 44 N79-17313
- Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521
- STORAGE STABILITY**  
Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155
- Gas diffusion liquid storage bag and method of use for storing blood  
[NASA-CASE-NPO-13930-1] c 52 N79-14749
- Method for retarding dye fading during archival storage of developed color photographic film --- inert atmosphere  
[NASA-CASE-MFS-23250-1] c 35 N82-11432
- STORAGE TANKS**  
Expulsion bladder-equipped storage tank structure Patent  
[NASA-CASE-XNP-00612] c 11 N70-38182
- Method for leakage testing of tanks  
[NASA-CASE-XMF-02392] c 32 N71-24285
- Zero gravity shadow shield aligner  
[NASA-CASE-KSC-10622-1] c 31 N72-21893
- Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c 37 N80-18393
- STOWAGE (ONBOARD EQUIPMENT)**  
Hemispherical latching apparatus  
[NASA-CASE-MFS-25837-1] c 18 N85-29991
- STRAIN GAGE ACCELEROMETERS**  
Accelerometer with FM output Patent  
[NASA-CASE-XLA-00492] c 14 N70-34799
- Angular accelerometer Patent  
[NASA-CASE-XMS-05936] c 14 N70-41682
- STRAIN GAGE BALANCES**  
Self-balancing strain gage transducer Patent  
[NASA-CASE-MFS-12827] c 14 N71-17656
- STRAIN GAGES**  
Semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980] c 09 N69-27422
- Wire grid forming apparatus Patent  
[NASA-CASE-XLE-00023] c 15 N70-33330
- Force measuring instrument Patent  
[NASA-CASE-XMF-00456] c 14 N70-34705
- Strain gage Patent Application  
[NASA-CASE-FRC-10053] c 14 N70-35587
- Difference circuit Patent  
[NASA-CASE-XNP-08274] c 10 N71-13537
- Strain sensor for high temperatures Patent  
[NASA-CASE-XNP-09205] c 14 N71-17657
- Extensometer Patent  
[NASA-CASE-XMF-04680] c 15 N71-19489
- Strain gauge measuring techniques Patent  
[NASA-CASE-XGS-04478] c 14 N71-24233
- Method of temperature compensating semiconductor strain gages Patent  
[NASA-CASE-XLA-04555-1] c 14 N71-25892
- Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200
- Method of making semiconductor p-n junction stress and strain sensor  
[NASA-CASE-XLA-04980-2] c 14 N72-28438
- Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945
- Strain gauge ambiguity sensor for segmented mirror active optical system  
[NASA-CASE-MFS-20506-1] c 35 N75-12273
- Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329
- Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c 35 N75-33369
- Strain gage mounting assembly  
[NASA-CASE-NPO-13170-1] c 35 N76-14430
- High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523
- Miniature biaxial strain transducer  
[NASA-CASE-LAR-11648-1] c 35 N77-14407
- CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c 39 N78-15512
- Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c 35 N80-20560
- Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400
- Pulsed phase locked loop strain monitor --- voltage controlled oscillators  
[NASA-CASE-LAR-12772-1] c 33 N83-16626
- Inflatable device for installing strain gage bridges  
[NASA-CASE-FRC-11068-1] c 35 N84-12443
- Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015
- Strain gage calibration  
[NASA-CASE-LAR-12743-1] c 35 N84-28019
- Thin film strain transducer --- suitable for in-flight measurement of scientific balloon strain  
[NASA-CASE-WLP-10055-2] c 35 N85-21598
- Inductive energy for rapid strain gage attachment  
[NASA-CASE-LAR-13237-1] c 35 N86-24960
- STRAIN MEASUREMENT**  
Thin film strain transducer --- suitable for in-flight measurement of scientific balloon strain  
[NASA-CASE-WLP-10055-2] c 35 N85-21598
- STRAIN RATE**  
Light intensity strain analysis  
[NASA-CASE-LAR-10765-1] c 32 N73-20740
- Strain gage calibration  
[NASA-CASE-LAR-12743-1] c 35 N84-28019
- STRAKES**  
Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400
- STRAPDOWN INERTIAL GUIDANCE**  
All sky pointing attitude control system  
[NASA-CASE-ARC-10716-1] c 35 N77-20399
- STRAPS**  
Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615
- Cryogenic container compound suspension strap  
[NASA-CASE-ARC-11157-1] c 37 N80-18393

## STRATIGRAPHY

System for plotting subsoil structure and method therefor

[NASA-CASE-NPO-14191-1] c 31 N80-32584

## STREAMS

Apparatus for measuring a sorbate dispersed in a fluid stream

[NASA-CASE-ARC-10896-1] c 35 N78-19465

## STRESS ANALYSIS

Method and apparatus for measuring the damping characteristics of a structure

[NASA-CASE-ARC-10154-1] c 14 N72-22440

Light intensity strain analysis

[NASA-CASE-LAR-10765-1] c 32 N73-20740

High temperature strain gage calibration fixture

[NASA-CASE-LAR-11500-1] c 35 N76-24523

## STRESS CONCENTRATION

Self-supporting strain transducer

[NASA-CASE-LAR-11263-1] c 35 N75-33369

## STRESS CORROSION

Method of inhibiting stress corrosion cracks in titanium alloys Patent

[NASA-CASE-NPO-10271] c 17 N71-16393

Controlled glass bead peening Patent

[NASA-CASE-XLA-07390] c 15 N71-18616

## STRESS MEASUREMENT

Semiconductor p-n junction stress and strain sensor

[NASA-CASE-XLA-04980] c 09 N69-27422

Force measuring instrument Patent

[NASA-CASE-XMF-00456] c 14 N70-34705

Self-balancing strain gage transducer Patent

[NASA-CASE-MFS-12827] c 14 N71-17656

Strain coupled servo control system Patent

[NASA-CASE-XLA-08530] c 32 N71-25360

Amplifying ribbon extensometer

[NASA-CASE-LAR-11825-1] c 35 N77-22449

CW ultrasonic bolt tensioning monitor

[NASA-CASE-LAR-12016-1] c 39 N78-15512

Acoustic radiation stress measurement

[NASA-CASE-LAR-13440-1] c 71 N86-22307

## STRESS RELAXATION

Method for alleviating thermal stress damage in laminates --- metal matrix composites

[NASA-CASE-LEW-12493-1] c 24 N81-17170

## STRESS RELIEVING

All-directional fastener Patent

[NASA-CASE-XLA-01807] c 15 N71-10799

Steam cooled rich-burn combustor liner

[NASA-CASE-LEW-13609-1] c 25 N83-17628

## STRESSES

Tape recorder Patent

[NASA-CASE-XGS-08259] c 14 N71-23698

Strain gauge measuring techniques Patent

[NASA-CASE-XGS-04478] c 14 N71-24233

Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts

[NASA-CASE-MSC-14182-1] c 27 N76-14264

Fixture for environmental exposure of structural materials under compression load

[NASA-CASE-LAR-12602-1] c 39 N83-32081

## STRETCHERS

Rescue litter flotation assembly Patent

[NASA-CASE-XMS-04170] c 05 N71-22748

Stretcher Patent

[NASA-CASE-XMF-06589] c 05 N71-23159

## STRETCHING

Fastener stretcher

[NASA-CASE-GSC-11149-1] c 15 N73-30457

## STRINGERS

Preloaded space structural coupling joints

[NASA-CASE-LAR-13489-1] c 18 N86-31630

## STRINGS

Omnidirectional joint Patent

[NASA-CASE-XMS-09635] c 05 N71-24623

## STRIP TRANSMISSION LINES

Microwave integrated circuit for Josephson voltage standards

[NASA-CASE-MFS-23845-1] c 33 N81-17348

Microwave switching power divider --- antenna feeds

[NASA-CASE-GSC-12420-1] c 33 N82-16340

## STRUCTURAL ANALYSIS

Window defect planar mapping technique

[NASA-CASE-MSC-19442-1] c 74 N77-10899

## STRUCTURAL DESIGN

Life raft Patent

[NASA-CASE-XMS-00863] c 05 N70-34857

High pressure regulator valve Patent

[NASA-CASE-XNP-00710] c 15 N71-10778

Lifting body Patent Application

[NASA-CASE-FRC-10063] c 01 N71-12217

Ring wing tension vehicle Patent

[NASA-CASE-XLA-0490-1] c 31 N71-24315

Opto-mechanical subsystem with temperature compensation through isothermal design

[NASA-CASE-GSC-12059-1] c 35 N77-27366

Lightweight reflector assembly

[NASA-CASE-NPO-13707-1] c 74 N77-28933

Horizontally mounted solar collector

[NASA-CASE-MFS-23349-1] c 44 N79-23481

Fluid flow meter for measuring the rate of fluid flow in a conduit

[NASA-CASE-MFS-28030-1] c 35 N86-25752

## STRUCTURAL DESIGN CRITERIA

Geometries for roughness shapes in laminar flow

[NASA-CASE-LAR-13255-1] c 02 N84-12092

Compliant hydrodynamic fluid journal bearing

[NASA-CASE-LEW-13670-1] c 37 N86-19606

## STRUCTURAL ENGINEERING

Beam connector apparatus and assembly

[NASA-CASE-MFS-25134-1] c 31 N83-31895

## STRUCTURAL FAILURE

Method and apparatus for nondestructive testing of pressure vessels

[NASA-CASE-NPO-12142-1] c 38 N76-28563

## STRUCTURAL MEMBERS

Broadband choke for antenna structure

[NASA-CASE-XMS-05303] c 07 N69-27462

Optical alignment system Patent

[NASA-CASE-XNP-02029] c 14 N70-41955

All-directional fastener Patent

[NASA-CASE-XLA-01807] c 15 N71-10799

Frictionless universal joint Patent

[NASA-CASE-NPO-10646] c 15 N71-28467

Fastener stretcher

[NASA-CASE-GSC-11149-1] c 15 N73-30457

Method of laminating structural members

[NASA-CASE-XLA-11028-1] c 24 N74-27035

Folding structure fabricated of rigid panels

[NASA-CASE-XHQ-02146] c 18 N75-27040

Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts

[NASA-CASE-MSC-14182-1] c 27 N76-14264

Mechanical end joint system for structural column elements

[NASA-CASE-LAR-12482-1] c 37 N82-32732

Daze fasteners

[NASA-CASE-LAR-13009-1] c 37 N85-29285

## STRUCTURAL STABILITY

Latching device

[NASA-CASE-MFS-21606-1] c 37 N75-19685

Flanged major modular assembly jig

[NASA-CASE-MSC-19372-1] c 39 N76-31562

Deployable M-braced truss structure

[NASA-CASE-LAR-13081-1] c 37 N86-32737

## STRUCTURAL VIBRATION

Electrical connector Patent Application

[NASA-CASE-MFS-14741] c 09 N70-20737

Seismic displacement transducer Patent

[NASA-CASE-XMF-00479] c 14 N70-34794

Vibrating structure displacement measuring instrument Patent

[NASA-CASE-XLA-03135] c 32 N71-16428

Active notch filter network with variable notch depth, width and frequency

[NASA-CASE-FRC-11055-1] c 33 N80-29583

## STRUCTURES

Arbitrarily shaped model survey system Patent

[NASA-CASE-LAR-10098] c 32 N71-26681

## STRUTS

Energy absorbing structure Patent Application

[NASA-CASE-MSC-12279-1] c 15 N70-35679

Collapsible structure for an antenna reflector

[NASA-CASE-NPO-11751] c 07 N73-24176

Locking redundant link

[NASA-CASE-LAR-11900-1] c 37 N79-14382

Multiple pure tone elimination strut assembly --- air breathing engines

[NASA-CASE-FRC-11062-1] c 71 N82-16800

Variable length strut with longitudinal compliance and locking capability

[NASA-CASE-MFS-25907-1] c 37 N85-34401

## STUDS (STRUCTURAL MEMBERS)

Safety-type locking pin

[NASA-CASE-MFS-18495] c 15 N72-11385

Stud-bonding gun

[NASA-CASE-MFS-20299] c 15 N72-11392

Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material

[NASA-CASE-MFS-21485-1] c 37 N74-25968

## STYRENES

Heat resistant polymers of oxidized styrylphosphine

[NASA-CASE-MSC-14903-1] c 27 N78-32256

Compound oxidized styrylphosphine --- flame resistant vinyl polymers

[NASA-CASE-MSC-14903-2] c 27 N80-10358

Heat resistant polymers of oxidized styrylphosphine

[NASA-CASE-MSC-14903-3] c 27 N80-24438

Stabilized unsaturated polyesters

[NASA-CASE-NPO-16103-1] c 27 N85-29043

## SUBASSEMBLIES

Multistage spent particle collector and a method for making same

[NASA-CASE-LEW-13914-1] c 37 N85-33489

## SUBCRITICAL FLOW

Method for growth of crystals by pressure reduction of supercritical or subcritical solution

[NASA-CASE-NPO-15772-1] c 76 N85-29800

## SUBLIMATION

Tubular sublimatory evaporator heat sink

[NASA-CASE-ARC-10912-1] c 34 N77-19353

Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics

[NASA-CASE-NPO-10424-1] c 27 N81-24258

## SUBMARINES

Low density bismaleimide-carbon microballoon composites --- aircraft and submarine compartment safety

[NASA-CASE-ARC-11040-2] c 24 N78-27184

## SUBMERGING

Liquid immersion apparatus for minute articles

[NASA-CASE-MFS-25363-1] c 37 N82-12441

Liquid-immersible electrostatic ultrasonic transducer

[NASA-CASE-LAR-12465-1] c 33 N82-26572

## SUBMILLIMETER WAVES

Submillimeter wave Schottky barrier diode with low series resistance and low noise

[NASA-CASE-NPO-15935-1] c 33 N83-12334

Ladder supported ring bar circuit

[NASA-CASE-LEW-13570-1] c 33 N84-16452

Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector

[NASA-CASE-NPO-16372-1] c 72 N85-30779

Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector

[NASA-CASE-NPO-16372-1] c 72 N86-33127

## SUBMINIATURIZATION

Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent

[NASA-CASE-XNP-00384] c 09 N71-13530

## SUBREFLECTORS

Dish antenna having switchable beamwidth --- with truncated concave ellipsoid subreflector

[NASA-CASE-GSC-11760-1] c 33 N75-19516

## SUBSONIC FLOW

Leading edge vortex flaps for drag reduction --- during subsonic flight

[NASA-CASE-LAR-12750-1] c 02 N81-19016

## SUBSONIC SPEED

Landing arrangement for aerospace vehicle Patent

[NASA-CASE-XLA-00805] c 31 N70-38010

Leading edge curvature based on convective heating Patent

[NASA-CASE-XLA-01486] c 01 N71-23497

Airfoil shape for flight at subsonic speeds --- design analysis and aerodynamic characteristics of the GAW-1 airfoil

[NASA-CASE-LAR-10585-1] c 02 N76-22154

Self stabilizing sonic inlet

[NASA-CASE-LEW-11890-1] c 05 N79-24976

## SUBSONIC WIND TUNNELS

Variable geometry wind tunnels

[NASA-CASE-XLA-07430] c 11 N72-22246

## SUBSTRATES

Means and methods of depositing thin films on substrates Patent

[NASA-CASE-XNP-00595] c 15 N70-34967

Solar cell mounting Patent

[NASA-CASE-XNP-00826] c 03 N71-20895

Solar panel fabrication Patent

[NASA-CASE-XNP-03413] c 03 N71-26726

Fabrication of polycrystalline solar cells on low-cost substrates

[NASA-CASE-GSC-12022-1] c 44 N76-28635

Process for producing a well-adhered durable optical coating on an optical plastic substrate --- abrasion resistant polymethyl methacrylate lenses

[NASA-CASE-ARC-11039-1] c 74 N78-32854

Attaching of strain gages to substrates

[NASA-CASE-FRC-10093-1] c 35 N80-20580

Method for applying photographic resists to otherwise incompatible substrates

[NASA-CASE-MSC-18107-1] c 27 N81-25209

Refractory coatings

[NASA-CASE-LEW-13169-2] c 26 N82-30371

Pyroelectric detector arrays

[NASA-CASE-LAR-12363-1] c 35 N82-31659

Method for depositing an oxide coating

[NASA-CASE-LEW-13131-1] c 44 N83-10494

- Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13528-1] c 36 N84-22944
- Coating with overlay metallic-cermet alloy systems  
[NASA-CASE-LEW-13839-2] c 26 N84-27855
- Overlay metallic-cermet alloy coating systems  
[NASA-CASE-LEW-13839-1] c 26 N84-33555
- Increased voltage photovoltaic cell  
[NASA-CASE-NPO-16155-1] c 44 N85-30475
- Liquid crystal light valve structures  
[NASA-CASE-MSC-20036-1] c 76 N85-33826
- Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- Oxidation resistant slurry coating for carbon-based materials  
[NASA-CASE-LEW-13923-1] c 26 N85-35267
- Diffusion oxygen barrier coating A02/MF A01  
[NASA-CASE-LAR-13474-1-SB] c 26 N86-24814
- SUBSTRUCTURES**
- Support structure for irradiated elements Patent  
[NASA-CASE-XNP-06031] c 15 N71-15606
- Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366
- System for detecting substructure microfractures and method therefore  
[NASA-CASE-NPO-14192-1] c 39 N80-10507
- Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N83-28281
- SUCTION**
- Pumped vortex  
[NASA-CASE-LAR-12625-1] c 02 N83-19715
- SUGARS**
- Production of butanol by fermentation in the presence of cocultures of clostridium  
[NASA-CASE-NPO-16203-1] c 23 N85-35227
- SULFATES**
- Intumescent paints Patent  
[NASA-CASE-ARC-10099-1] c 18 N71-15469
- SULFIDES**
- Stabilized lanthanum sulphur compounds --- thermoelectric materials  
[NASA-CASE-NPO-18135-1] c 25 N83-24572
- SULFONES**
- Electrolytic cell structure  
[NASA-CASE-LAR-11042-1] c 33 N75-27252
- Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-1] c 27 N84-22747
- Process for preparing solvent resistant, thermoplastic aromatic poly(imidesulfone)  
[NASA-CASE-LAR-12858-2] c 27 N85-20124
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675
- Semi-2-interpenetrating networks of high temperature systems  
[NASA-CASE-LAR-13450-1] c 27 N86-25478
- Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- SULFONIC ACID**
- Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096
- The 1,1,1-triaryl-2,2,2-trifluoroethanes and process for their synthesis  
[NASA-CASE-ARC-11097-1] c 25 N82-24312
- SULFUR COMPOUNDS**
- Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
[NASA-CASE-ARC-10325] c 06 N72-25147
- SULFUR DIOXIDES**
- Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656
- Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c 45 N79-12584
- SULFURIC ACID**
- Synthesis of 2,4,8,10-tetroxaspiro[5.5]undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187
- SUM RULES**
- Computing apparatus Patent  
[NASA-CASE-XGS-04765] c 08 N71-18693
- SUMPS**
- Fluid driven sump pump  
[NASA-CASE-ARC-11414-1] c 37 N83-20152
- SUN**
- Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c 44 N79-14526
- SUNGLASSES**
- Soft frame adjustable eyeglasses Patent  
[NASA-CASE-XMS-06064] c 05 N71-23096
- SUNLIGHT**
- Illumination system including a virtual light source Patent  
[NASA-CASE-HQN-10781] c 23 N71-30292
- Illumination control apparatus for compensating solar light  
[NASA-CASE-KSC-11010-1] c 74 N79-12890
- Cloud cover sensor  
[NASA-CASE-NPO-14936-1] c 47 N83-32232
- Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N86-20803
- SUPERCHARGERS**
- Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c 20 N80-14188
- Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808
- SUPERCONDUCTING MAGNETS**
- Cryogenic apparatus for measuring the intensity of magnetic fields  
[NASA-CASE-XAC-02407] c 14 N69-27423
- Superconducting alternator  
[NASA-CASE-XLE-02824] c 03 N69-39690
- Segmented superconducting magnet for a broadband traveling wave maser Patent  
[NASA-CASE-XGS-10518] c 16 N71-28554
- Superconducting magnet Patent  
[NASA-CASE-XNP-08503] c 23 N71-29049
- Magnetometer using superconducting rotating body  
[NASA-CASE-NPO-13388-1] c 35 N76-16390
- Stable superconducting magnet --- high current levels below critical temperature  
[NASA-CASE-XMF-08373-1] c 33 N79-21264
- Reciprocating magnetic refrigerator employing tandem porous matrices within a reciprocating displacer  
[NASA-CASE-NPO-16257-1] c 31 N85-29082
- SUPERCONDUCTIVITY**
- Superconducting alternator Patent  
[NASA-CASE-XLE-02823] c 09 N71-23443
- System for improving signal-to-noise ratio of a communication signal  
[NASA-CASE-MSC-12258-2] c 07 N72-33146
- Superconductive magnetic-field-trapping device  
[NASA-CASE-XNP-01185] c 26 N73-26710
- Doped Josephson tunneling junction for use in a sensitive IR detector  
[NASA-CASE-NPO-13348-1] c 33 N75-31332
- Method of producing high T superconducting NbN films  
[NASA-CASE-NPO-16881-1-CU] c 76 N86-21401
- SUPERCONDUCTORS**
- Superconductive accelerometer Patent  
[NASA-CASE-XMF-01099] c 14 N71-15969
- Twisted multilament superconductor  
[NASA-CASE-LEW-11726-1] c 26 N73-26752
- Method of fabricating a twisted composite superconductor  
[NASA-CASE-LEW-11015] c 26 N73-32571
- Germanium coated microbridge and method  
[NASA-CASE-MFS-23274-1] c 33 N78-13320
- SUPERCOOLING**
- Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-28650
- SUPERCritical FLUIDS**
- Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
[NASA-CASE-NPO-15772-1] c 76 N85-29800
- SUPERCritical PRESSURES**
- Oil shale extraction using super-critical extraction  
[NASA-CASE-NPO-15656-1] c 43 N84-23012
- SUPERFLUIDITY**
- Helium refining by superfluidity Patent  
[NASA-CASE-XNP-00733] c 06 N70-34946
- Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575
- SUPERHEATING**
- Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c 44 N78-31667
- SUPERHIGH FREQUENCIES**
- Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524
- SUPERPLASTICITY**
- Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296
- SUPERSONIC AIRCRAFT**
- Variable sweep wing configuration Patent  
[NASA-CASE-XLA-00230] c 02 N70-33255
- Variable sweep aircraft wing Patent  
[NASA-CASE-XLA-00350] c 02 N70-38011
- Variable sweep aircraft Patent  
[NASA-CASE-XLA-03659] c 02 N71-11041
- Translating horizontal tail Patent  
[NASA-CASE-XLA-08801-1] c 02 N71-11043
- Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243
- Absorptive splitter for closely spaced supersonic engine air inlets Patent  
[NASA-CASE-XLA-02865] c 28 N71-15583
- Oblique-wing supersonic aircraft  
[NASA-CASE-ARC-10470-3] c 05 N76-29217
- SUPERSONIC COMBUSTION**
- Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502
- Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168
- SUPERSONIC DRAG**
- Annular supersonic decelerator or drogue Patent  
[NASA-CASE-XLE-00222] c 02 N70-37939
- SUPERSONIC FLIGHT**
- Variable sweep wing aircraft Patent  
[NASA-CASE-XLA-00221] c 02 N70-33286
- High speed flight vehicle control Patent  
[NASA-CASE-XLA-08987] c 02 N71-27088
- SUPERSONIC FLOW**
- Optical probing of supersonic flows with statistical correlation  
[NASA-CASE-MFS-20642] c 14 N72-21407
- Stagnation pressure probe --- for measuring pressure of supersonic gas streams  
[NASA-CASE-LAR-11139-1] c 35 N74-32878
- SUPERSONIC INLETS**
- Airflow control system for supersonic inlets  
[NASA-CASE-LEW-11166-1] c 02 N74-20846
- Shock position sensor for supersonic inlets --- measuring pressure in the throat of a supersonic inlet  
[NASA-CASE-LEW-11815-1] c 35 N76-14431
- Hypersonic airbreathing missile  
[NASA-CASE-LAR-12264-1] c 15 N78-32168
- SUPERSONIC NOZZLES**
- Penshape exhaust nozzle for supersonic engine Patent  
[NASA-CASE-XLE-00057] c 28 N70-38711
- Telescoping-apike supersonic inlet for aircraft engines Patent  
[NASA-CASE-XLE-00005] c 28 N70-39899
- Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816
- Aircraft engine nozzle  
[NASA-CASE-ARC-10977-1] c 07 N80-32392
- SUPERSONIC SPEED**
- Continuously operating induction plasma accelerator Patent  
[NASA-CASE-XLA-01354] c 25 N70-36946
- Static pressure probe  
[NASA-CASE-LAR-11552-1] c 35 N76-14429
- SUPERSONIC TRANSPORTS**
- Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958
- Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287
- Position location system and method  
[NASA-CASE-GSC-10087-3] c 07 N72-12080
- Doppler compensation by shifting transmitted object frequency within limits  
[NASA-CASE-GSC-10087-4] c 07 N73-20174
- Supersonic transport --- using canard surfaces  
[NASA-CASE-LAR-11932-1] c 05 N78-32086
- SUPERSONIC WIND TUNNELS**
- Wind tunnel  
[NASA-CASE-LAR-10135-1] c 09 N79-21083
- Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235
- SUPPLYING**
- Advanced vapor supply manifold  
[NASA-CASE-LAR-13258-1] c 37 N86-20800
- SUPPORT INTERFERENCE**
- Spherical bearing --- to reduce vibration effects  
[NASA-CASE-MFS-23447-1] c 37 N79-11404
- SUPPORT SYSTEMS**
- Hydraulic support for dynamic testing Patent  
[NASA-CASE-XMF-03248] c 11 N71-10604
- Support structure for irradiated elements Patent  
[NASA-CASE-XNP-06031] c 15 N71-15606
- Multilegged support system Patent  
[NASA-CASE-XLA-01326] c 11 N71-21481
- Adjustable support  
[NASA-CASE-NPO-10721] c 15 N72-27484
- Hydrostatic bearing support  
[NASA-CASE-LEW-11158-1] c 37 N77-28486
- Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254
- SUPPORTS**
- A support technique for vertically oriented launch vehicles  
[NASA-CASE-XLA-02704] c 11 N69-21540
- Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c 11 N69-24321

- Optical spin compensator  
[NASA-CASE-XGS-02401] c 14 N69-27485
- Extensible cable support Patent  
[NASA-CASE-XMF-07587] c 15 N71-18701
- Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c 15 N71-23812
- Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627
- Angular displacement indicating gas bearing support system Patent  
[NASA-CASE-XLA-09346] c 15 N71-28740
- Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123
- Fine adjustment mount  
[NASA-CASE-MFS-20249] c 15 N72-11386
- Expandable support means  
[NASA-CASE-NPO-11059] c 15 N72-17454
- Optical system support apparatus  
[NASA-CASE-XER-07896-2] c 23 N72-22673
- Fixture for supporting articles during vibration tests  
[NASA-CASE-MFS-20523] c 14 N72-27412
- Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267
- Collapsible structure for an antenna reflector  
[NASA-CASE-NPO-11751] c 07 N73-24176
- Method of making porous conductive supports for electrodes --- by electroforming and stacking nickel foils  
[NASA-CASE-GSC-11367-1] c 44 N74-19692
- Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c 18 N74-27397
- Variable contour securing system  
[NASA-CASE-MSC-16270-1] c 37 N78-27423
- Heat treat fixture and method of heat treating  
[NASA-CASE-LAR-11821-1] c 26 N80-28492
- Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-2] c 52 N81-25661
- Model mount system for testing flutter  
[NASA-CASE-LAR-12950-1] c 09 N84-34448
- Remote pivot decoupler pylon: Wing/store suppression  
[NASA-CASE-LAR-13173-1] c 05 N85-19981
- Portable pallet weighing apparatus  
[NASA-CASE-GSC-12789-1] c 35 N85-20294
- Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112
- Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1] c 09 N86-31594

**SUPPRESSORS**

- Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980

**SURFACE ACOUSTIC WAVE DEVICES**

- Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c 71 N77-26919

**SURFACE CRACKS**

- Elastomer coated filler and composites thereof comprising at least 60% by weight of a hydrated filler and an elastomer containing an acid substituent  
[NASA-CASE-NPO-14857-1] c 27 N83-19900

**SURFACE DEFECTS**

- Microwave flaw detector Patent  
[NASA-CASE-ARC-10009-1] c 15 N71-17822
- Method and device for detection of surface discontinuities or defects  
[NASA-CASE-MSC-14187-1] c 35 N74-32879

**SURFACE DIFFUSION**

- Metallic film diffusion for boundary lubrication Patent  
[NASA-CASE-XLE-01765] c 18 N71-10772
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887

**SURFACE FINISHING**

- Method of forming transparent films of ZnO  
[NASA-CASE-FRC-10019] c 15 N73-12487
- Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662
- Surface finishing --- for aircraft wings  
[NASA-CASE-MSC-12631-1] c 24 N77-28225
- Modification of the electrical and optical properties of polymers --- ion irradiation to create texture  
[NASA-CASE-LEW-13027-1] c 27 N80-24437
- Surface finishing  
[NASA-CASE-MSC-12631-3] c 27 N81-14077
- Method of cold welding using ion beam technology  
[NASA-CASE-LEW-12982-1] c 37 N81-19455
- Surface texturing of fluoropolymers  
[NASA-CASE-LEW-13028-1] c 27 N82-33521
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996
- Electrodes for solid state devices  
[NASA-CASE-NPO-15161-1] c 33 N84-16456

- Textured carbon surfaces on copper  
[NASA-CASE-LEW-14130-1] c 31 N85-20156
- Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267
- A method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N86-20128
- Ion-beam nitriding of steels  
[NASA-CASE-LEW-14104-2] c 26 N86-32556
- Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587

**SURFACE IONIZATION**

- Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678
- Method and apparatus for detecting surface ions on silicon diodes and transistors  
[NASA-CASE-ERC-10325] c 15 N72-25457

**SURFACE LAYERS**

- Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers Patent  
[NASA-CASE-XGS-02011] c 15 N71-20739
- Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient  
[NASA-CASE-ERC-10073-1] c 24 N74-19769
- Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039

**SURFACE PROPERTIES**

- Pretreatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N69-21471
- Ablation article and method  
[NASA-CASE-LAR-10439-1] c 33 N73-27796
- Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c 34 N74-15652
- Apparatus for scanning the surface of a cylindrical body  
[NASA-CASE-NPO-11861-1] c 36 N74-20009
- Apparatus for microbiological sampling --- including automatic swabbing  
[NASA-CASE-LAR-11069-1] c 35 N75-12272
- Penetrometer --- for determining load bearing characteristics of inclined surfaces  
[NASA-CASE-NPO-11103-1] c 35 N77-27367
- Device for measuring the contour of a surface  
[NASA-CASE-LAR-11869-1] c 74 N78-27904
- Displacement probes with self-contained exciting medium  
[NASA-CASE-LAR-11690-1] c 35 N80-14371
- Apparatus for electrolytically tapered or contoured cavities  
[NASA-CASE-XNP-08835-1] c 37 N80-14395
- Mechanical bonding of metal method  
[NASA-CASE-LEW-12941-1] c 26 N83-10170
- Apparatus and method for inspecting a bearing ball --- eddy current inspection technique  
[NASA-CASE-MFS-25833-1] c 35 N83-21316
- Ion beam sputter etching  
[NASA-CASE-LEW-13899-1] c 31 N86-20587
- Apparatus and method for inspecting a bearing ball  
[NASA-CASE-MFS-25833-1] c 35 N86-32698

**SURFACE REACTIONS**

- Nondestructive spot test method for magnesium and magnesium alloys  
[NASA-CASE-LAR-10953-1] c 17 N73-27446
- Means for phase locking the outputs of a surface emitting laser diode array  
[NASA-CASE-NPO-16542-1-CU] c 36 N86-20780

**SURFACE ROUGHNESS**

- Surface roughness detector Patent  
[NASA-CASE-XLA-00203] c 14 N70-34161
- Optical inspection apparatus Patent  
[NASA-CASE-XMF-00462] c 14 N70-34298
- Contour surveying system Patent  
[NASA-CASE-XLA-08646] c 14 N71-17586
- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
[NASA-CASE-LEW-13120-1] c 27 N82-28440
- Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117
- Ion sputter textured graphite electrode plates  
[NASA-CASE-LEW-12919-2] c 70 N84-28565

**SURFACE ROUGHNESS EFFECTS**

- Meteorological balloon Patent  
[NASA-CASE-XMF-04163] c 02 N71-23007

**SURFACE TEMPERATURE**

- Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144

**SURFACE VEHICLES**

- Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c 11 N72-20244

- Vehicle for use in planetary exploration  
[NASA-CASE-NPO-11366] c 11 N73-26238
- Short range laser obstacle detector --- for surface vehicles using laser diode array  
[NASA-CASE-NPO-11856-1] c 36 N74-15145
- Vehicle locating system utilizing AM broadcasting station carriers  
[NASA-CASE-NPO-13217-1] c 32 N75-26194
- Vehicular impact absorption system  
[NASA-CASE-NPO-14014-1] c 37 N79-10420
- Personnel emergency carrier vehicle  
[NASA-CASE-KSC-11282-1] c 85 N86-22452

**SURFACE WAVES**

- Antenna design for surface wave suppression Patent  
[NASA-CASE-XLA-10772] c 07 N71-28980
- Solar energy converter using surface plasma waves  
[NASA-CASE-LEW-13827-1] c 44 N85-21768
- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282

**SURFACES**

- Recoverable rocket vehicle Patent  
[NASA-CASE-XMF-00389] c 31 N70-34176
- Friction measuring apparatus Patent  
[NASA-CASE-XNP-08680] c 14 N71-22995
- Three-axis adjustable loading structure  
[NASA-CASE-FRC-10051-1] c 35 N74-13129
- Photoelectron spectrometer with means for stabilizing sample surface potential  
[NASA-CASE-NPO-13772-1] c 35 N78-10429

**SURFACTANTS**

- Surfactant-assisted liquefaction of particulate carbonaceous substances  
[NASA-CASE-NPO-13904-1] c 25 N79-11152

**SURGERY**

- Tissue macerating instrument  
[NASA-CASE-LEW-12668-1] c 52 N78-14773
- Intra-ocular pressure normalization technique and equipment  
[NASA-CASE-LEW-12955-1] c 52 N80-14684
- Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389

**SURGES**

- Transient-compensated SCR inverter  
[NASA-CASE-XLA-08507] c 09 N69-39984
- Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c 10 N71-26531

**SURGICAL INSTRUMENTS**

- Ophthalmic method and apparatus  
[NASA-CASE-LEW-11669-1] c 05 N73-27062
- Ophthalmic liquefaction pump  
[NASA-CASE-LEW-12051-1] c 52 N75-33640
- Cutting head for ultrasonic lithotripsy  
[NASA-CASE-GSC-12944-1] c 52 N86-19885

**SURVIVAL EQUIPMENT**

- Survival couch Patent  
[NASA-CASE-XLA-00118] c 05 N70-33285
- Life preserver Patent  
[NASA-CASE-XMS-00864] c 05 N70-36493
- Soft frame adjustable eyeglasses Patent  
[NASA-CASE-XMS-00604] c 05 N71-23096

**SUSPENDING (HANGING)**

- Parallel motion suspension device Patent  
[NASA-CASE-XNP-01567] c 15 N70-41310
- Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c 11 N71-16028
- Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146
- Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1] c 09 N86-31594

**SUSPENSION SYSTEMS (VEHICLES)**

- Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587

**SWEAT**

- Sweat collection capsule  
[NASA-CASE-ARC-11031-1] c 52 N81-29763

**SWEAT COOLING**

- Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226
- Transpirationally cooled heat ablation system Patent  
[NASA-CASE-XMS-02677] c 31 N70-42075
- Method of electroforming a rocket chamber  
[NASA-CASE-LEW-11118-1] c 20 N74-32919

**SWEEP CIRCUITS**

- Multiple slope sweep generator Patent  
[NASA-CASE-XMS-03542] c 09 N71-28926

**SWEEP EFFECT**

- High speed flight vehicle control Patent  
[NASA-CASE-XLA-08967] c 02 N71-27088
- Acoustically swept rotor --- helicopter noise reduction  
[NASA-CASE-ARC-11106-1] c 05 N80-14107

**SWEEP FREQUENCY**

- Swept group delay measurement  
[NASA-CASE-NPO-13909-1] c 33 N78-25319

**SWELLING**

Intumescent composition, foamed product prepared therefrom, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572

**SWEPT WINGS**

Supersonic aircraft Patent  
[NASA-CASE-XLA-04451] c 02 N71-12243  
Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAR-12750-1] c 02 N81-19016

**SWIRLING**

Slosh alleviator Patent  
[NASA-CASE-XLA-05749] c 15 N71-19569  
Swirl can primary combustor  
[NASA-CASE-LEW-11326-1] c 23 N73-30665  
Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195

**SWITCHES**

Switching mechanism with energy storage means Patent  
[NASA-CASE-XGS-00473] c 03 N70-38713  
Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-XNP-01466] c 10 N71-26434  
RF controlled solid state switch  
[NASA-CASE-ARC-10136-1] c 09 N72-22202  
High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c 33 N80-18285  
Automatic thermal switch  
[NASA-CASE-GSC-12415-1] c 33 N82-24419  
Fiber optic crossbar switch for automatically patching optical signals  
[NASA-CASE-KSC-11104-1] c 74 N83-29032  
Triac failure detector  
[NASA-CASE-MFS-25607-1] c 33 N83-34190  
Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307  
Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661  
Laser activated MTOS microwave device  
[NASA-CASE-NPO-16112-1] c 33 N86-19516

**SWITCHING**

Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975

**SWITCHING CIRCUITS**

Solid state switch  
[NASA-CASE-XNP-09228] c 09 N69-27500  
Power control circuit  
[NASA-CASE-XNP-02713] c 10 N69-39888  
A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148  
Space vehicle electrical system Patent  
[NASA-CASE-XMF-00517] c 03 N70-34157  
High speed low level electrical stepping switch Patent  
[NASA-CASE-XAC-00060] c 09 N70-39915  
Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-XNP-02654] c 10 N70-42032  
Electronic beam switching commutator Patent  
[NASA-CASE-XGS-01451] c 09 N71-10677  
Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c 09 N71-10798  
SCR blocking pulse gate amplifier Patent  
[NASA-CASE-XLA-07497] c 09 N71-12514  
Magnetic core current steering commutator Patent  
[NASA-CASE-NPO-10201] c 08 N71-18694  
A dc-coupled noninverting one-shot Patent  
[NASA-CASE-XNP-09450] c 10 N71-18723  
Reversible current control apparatus Patent  
[NASA-CASE-XLA-09371] c 10 N71-18724  
Exclusive-Or digital logic module Patent  
[NASA-CASE-XLA-07732] c 08 N71-18751  
Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864  
Sight switch using an infrared source and sensor Patent  
[NASA-CASE-XMF-03934] c 09 N71-22985  
Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c 09 N71-23015  
Drive circuit utilizing two cores Patent  
[NASA-CASE-XNP-01318] c 10 N71-23033  
Pulse modulator providing fast rise and fall times Patent  
[NASA-CASE-XMS-04919] c 09 N71-23270  
Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271  
Increasing efficiency of switching type regulator circuits Patent  
[NASA-CASE-XMS-09352] c 09 N71-23316  
Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c 09 N71-23548

Multialarm summary alarm Patent  
[NASA-CASE-XLE-03061-1] c 10 N71-24798  
Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799  
Inverter with means for base current shaping for sweeping charge carriers from base region Patent  
[NASA-CASE-XGS-06226] c 10 N71-25950  
Current steering switch Patent  
[NASA-CASE-XNP-06567] c 09 N71-26000  
Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent  
[NASA-CASE-XGS-04224] c 10 N71-26418  
Turn on transient limiter Patent  
[NASA-CASE-GSC-10413] c 10 N71-26531  
Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774  
Transistor drive regulator Patent  
[NASA-CASE-LEW-10233] c 10 N71-27126  
Compensating bandwidth switching transients in an amplifier circuit Patent  
[NASA-CASE-XNP-01107] c 10 N71-28859  
Monostable multivibrator with complementary NOR gates Patent  
[NASA-CASE-MSC-13492-1] c 10 N71-28860  
Digital memory sense amplifying means Patent  
[NASA-CASE-XNP-01012] c 08 N71-28925  
Current regulating voltage divider  
[NASA-CASE-MFS-20935] c 09 N71-34212  
Reference voltage switching unit  
[NASA-CASE-NPO-11253] c 09 N72-17157  
Optimum performance spacecraft solar cell system  
[NASA-CASE-GSC-10669-1] c 03 N72-20031  
Flow rate switch  
[NASA-CASE-NPO-10722] c 09 N72-20199  
Switching regulator  
[NASA-CASE-LEW-11005-1] c 09 N72-21243  
Data multiplexer using tree switching configuration  
[NASA-CASE-NPO-11333] c 08 N72-22162  
Pulse coupling circuit  
[NASA-CASE-LEW-10433-1] c 09 N72-22197  
Solid state remote circuit selector switch  
[NASA-CASE-LEW-10387] c 09 N72-22201  
Pressure operated electrical switch responsive to a pressure decrease after a pressure increase  
[NASA-CASE-LAR-10137-1] c 09 N72-22204  
Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c 10 N72-22236  
CRT blanking and brightness control circuit  
[NASA-CASE-KSC-10647-1] c 10 N72-31273  
Electronic video editor  
[NASA-CASE-KSC-10003] c 10 N73-13235  
Radiation sensitive solid state switch  
[NASA-CASE-NPO-10817-1] c 08 N73-30135  
Transparent switchboard  
[NASA-CASE-MSC-13746-1] c 10 N73-32143  
High isolation RF signal selection switches  
[NASA-CASE-NPO-13081-1] c 33 N74-22814  
Isolated output system for a class D switching-mode amplifier  
[NASA-CASE-MFS-21618-1] c 33 N75-30429  
Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c 33 N75-30431  
Multi-computer multiple data path hardware exchange system  
[NASA-CASE-NPO-13422-1] c 60 N76-14818  
Sustained arc ignition system  
[NASA-CASE-LAR-12444-1] c 33 N77-28385  
Window comparator  
[NASA-CASE-FRC-10090-1] c 33 N78-18308  
Module failure isolation circuit for paralleled inverters --- preventing system failure during power conditioning for spacecraft applications  
[NASA-CASE-NPO-14000-1] c 33 N79-24254  
System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c 33 N79-28415  
Self-reconfiguring solar cell system  
[NASA-CASE-LEW-12586-1] c 44 N80-14472  
Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404  
Microwave switching power divider --- antenna feeds  
[NASA-CASE-GSC-12420-1] c 33 N82-16340  
Control means for a solid state crossbar switch  
[NASA-CASE-NPO-15066-1] c 33 N82-29538  
Active lamp pulse driver circuit --- optical pumping of laser media  
[NASA-CASE-GSC-12566-1] c 33 N83-34189  
Pulsed thyristor trigger control circuit  
[NASA-CASE-MFS-25616-1] c 33 N84-16455  
Simplified dc to dc converter  
[NASA-CASE-LEW-13495-1] c 33 N84-33663  
Hybrid power semiconductor  
[NASA-CASE-LEW-13922-1] c 33 N86-20672

Ferroresonant regulated power supply  
[NASA-CASE-NPO-15977-1-CU] c 33 N86-20673  
Four quadrant control circuit for a brushless three phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N86-20682

**SWITCHING THEORY**

Multiple circuit switch apparatus with improved pivot actuator structure Patent  
[NASA-CASE-XAC-03777] c 10 N71-15909

**SWIVELS**

Swivel support for gas bearings Patent  
[NASA-CASE-XMF-07808] c 15 N71-23812

**SYNCHRONISM**

Time division multiplex system  
[NASA-CASE-XGS-05918] c 07 N69-39974  
Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281  
Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099  
Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent  
[NASA-CASE-XGS-03632] c 09 N71-23311  
Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326  
Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577  
Synchronized voltage contrast display analysis system  
[NASA-CASE-NPO-14567-1] c 33 N83-18996

**SYNCHRONIZED OSCILLATORS**

Phase demodulation system with two phase locked loops Patent  
[NASA-CASE-XNP-00777] c 10 N71-19469  
Phase locked phase modulator including a voltage controlled oscillator Patent  
[NASA-CASE-NPO-05382] c 10 N71-23544  
Automatic frequency control loop including synchronous switching circuits  
[NASA-CASE-KSC-10393] c 09 N72-21247  
Apparatus and method for tracking the fundamental frequency of an analog input signal  
[NASA-CASE-ARC-11367-1] c 33 N83-21238

**SYNCHRONIZERS**

Burst synchronization detection system Patent  
[NASA-CASE-XMS-05605-1] c 10 N71-19468  
Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773  
Synchronous servo loop control system Patent  
[NASA-CASE-XNP-03744] c 10 N71-20448  
Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613  
Video sync processor Patent  
[NASA-CASE-KSC-10002] c 10 N71-25865  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12462-1] c 32 N74-20809  
Pulse code modulated signal synchronizer  
[NASA-CASE-MSC-12494-1] c 32 N74-20810  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519  
Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c 17 N76-22245  
Memory-based frame synchronizer --- for digital communication systems  
[NASA-CASE-GSC-12430-1] c 60 N82-16747

**SYNCHRONOUS MOTORS**

Synchronous dc direct drive system Patent  
[NASA-CASE-GSC-10065-1] c 10 N71-27136  
Motor run-up system --- power lines  
[NASA-CASE-NPO-13374-1] c 33 N75-19524

**SYNCHRONOUS SATELLITES**

Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958  
Serrordyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c 07 N71-16088  
Traffic control system and method Patent  
[NASA-CASE-GSC-10087-1] c 02 N71-19287  
Tracking antenna system Patent  
[NASA-CASE-GSC-10553-1] c 07 N71-19854  
Satellite interlace synchronization system  
[NASA-CASE-GSC-10390-1] c 07 N72-11149  
Synchronous orbit battery cyclor  
[NASA-CASE-GSC-11211-1] c 03 N72-25020  
Systems and methods for determining radio frequency interference  
[NASA-CASE-GSC-12150-1] c 32 N79-11265  
Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c 32 N80-20448

## SYNTHESIS

- Synthesis of polymeric schiff bases by schiff-base exchange reactions Patent  
[NASA-CASE-XMF-08651] c 06 N71-11236
- Preparation of ordered poly /arylenesiloxane/ polymers  
[NASA-CASE-XMF-10753] c 06 N71-11237
- Imidazopyrrolone/imide copolymers Patent  
[NASA-CASE-XLA-08802] c 06 N71-11238
- Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids  
[NASA-CASE-LEW-11325-1] c 06 N73-27980

## SYNTHESIS (CHEMISTRY)

- Prepolymer dianhydrides  
[NASA-CASE-NPO-13899-1] c 27 N80-32515
- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104
- Bifunctional monomers having terminal oxime and cyano or amide groups  
[NASA-CASE-ARC-11253-3] c 27 N81-24256
- Synthesis of polyformals  
[NASA-CASE-ARC-11244-1] c 23 N82-16174
- Electrically conductive palladium containing polyimide films  
[NASA-CASE-LAR-12705-1] c 25 N82-26396
- Polyvinyl alcohol cross-linked with two aldehydes  
[NASA-CASE-LEW-13504-1] c 25 N83-13188
- Synthesis of dawsonites --- for use in fire extinguishing operations  
[NASA-CASE-ARC-11326-1] c 25 N83-33977
- Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041
- Polypyrrole ethers with imide linking groups  
[NASA-CASE-LAR-12980-1] c 27 N84-22749
- Fire resistant polymers based on 1-(diorgano oxyphosphoryl)methyl-2,4- and 2,6-diamino benzenes  
[NASA-CASE-ARC-11512-2] c 27 N85-21362
- Phenoxy resins containing pendent ethynyl groups and cured resins obtained therefrom  
[NASA-CASE-LAR-13262-1] c 23 N85-28973
- Synthesis of 2,4,8,10-tetroxaspiro[5.5]undecane  
[NASA-CASE-ARC-11243-2] c 23 N85-33187
- Fire-resistant phosphorus containing polyimides and copolyimides  
[NASA-CASE-ARC-11522-2] c 27 N85-34280
- Metal phthalocyanine intermediates for the preparation of polymers  
[NASA-CASE-ARC-11405-2] c 27 N86-19455
- Process for preparing phthalocyanine polymers  
[NASA-CASE-ARC-11511-2] c 27 N86-19461
- Polyanilines from aromatic diacetylenic diketones and diamines  
[NASA-CASE-LAR-13444-1-CU] c 27 N86-19462
- Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560
- Polyimides containing ATBN elastomers and the process for preparing same  
[NASA-CASE-LAR-13178-1] c 27 N86-20565
- Perfluoro (imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675
- Acetylene (ethynyl) terminated polyimide siloxane and process for preparation thereof  
[NASA-CASE-LAR-13318-1] c 27 N86-21685
- Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525
- Polyarylene ethers with improved properties  
[NASA-CASE-LAR-13555-1] c 23 N86-32526

## SYNTHESIZERS

- Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525

## SYNTHETIC APERTURE RADAR

- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Azimuth correlator for real-time synthetic aperture radar image processing  
[NASA-CASE-NPO-14019-1] c 32 N79-14268
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-1] c 32 N79-19195
- An electro-optical Doppler tracker means and method for optical correlation of synthetic aperture radar data  
[NASA-CASE-NPO-14998-1] c 33 N81-15194

- Real-time multiple-look synthetic aperture radar processor for spacecraft applications  
[NASA-CASE-NPO-14054-1] c 32 N82-12297
- Servomechanism for Doppler shift compensation in optical correlator for synthetic aperture radar  
[NASA-CASE-NPO-14998-1] c 32 N83-18975
- Clutter free synthetic aperture radar correlator  
[NASA-CASE-NPO-14035-1] c 32 N83-19968
- Multibeam single frequency synthetic aperture radar processor for imaging separate range swaths  
[NASA-CASE-NPO-14525-2] c 32 N83-31918
- Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951
- Pipelined digital SAR azimuth correlator using hybrid FFT-transversal filter  
[NASA-CASE-NPO-15519-1] c 32 N84-34651
- Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327
- Method and apparatus for contour mapping using synthetic aperture radar  
[NASA-CASE-NPO-15939-1] c 43 N86-19711

## SYNTHETIC FIBERS

- Fluid containers and resealable septum therefor Patent  
[NASA-CASE-NPO-10123] c 15 N71-24835
- Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MS-C-12109] c 18 N71-26285
- Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747
- Polymeric electrolytic hygrometer  
[NASA-CASE-NPO-13948-1] c 35 N78-25391
- Process for spinning flame retardant elastomeric compositions --- fabricating synthetic fibers for high oxygen environments  
[NASA-CASE-MS-C-14331-3] c 27 N78-32262
- Insoluble polyelectrolyte and ion-exchange hollow fiber impregnated therewith  
[NASA-CASE-NPO-13530-1] c 25 N81-17187
- Molten salt pyrolysis of latex --- synthetic hydrocarbon fuel production using the Guayule shrub  
[NASA-CASE-NPO-14315-1] c 27 N81-17261
- Solar heated fluidized bed gasification system  
[NASA-CASE-NPO-15071-1] c 44 N82-16475

## SYNTHETIC RESINS

- Coating process  
[NASA-CASE-XNP-06508] c 18 N69-39895
- Phosphorus-containing bisimide resins  
[NASA-CASE-ARC-11321-1] c 27 N81-27272
- Method for forming pyrrone molding powders and products of said method  
[NASA-CASE-LAR-10423-1] c 23 N82-29358
- Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560
- Process for the preparation of polycarboranylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271

## SYRINGES

- Micro-fluid exchange coupling apparatus  
[NASA-CASE-ARC-11114-1] c 51 N81-14605
- Automated syringe sampler --- remote sampling of air and water  
[NASA-CASE-LAR-12308-1] c 35 N81-29407

## SYSTEM EFFECTIVENESS

- System for the measurement of ultra-low stray light levels --- determining the adequacy of large space telescope systems  
[NASA-CASE-MFS-23513-1] c 74 N79-11865

## SYSTEM FAILURES

- Tape recorder Patent  
[NASA-CASE-XGS-08259] c 14 N71-23698
- Fault tolerant clock apparatus utilizing a controlled minority of clock elements  
[NASA-CASE-MS-C-12531-1] c 35 N75-30504
- Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115

## SYSTEMS ANALYSIS

- Analog-to-digital converter analyzing system  
[NASA-CASE-NPO-10560] c 08 N72-22166

## SYSTEMS ENGINEERING

- Magnetohydrodynamic induction machine  
[NASA-CASE-XNP-07481] c 25 N69-21929
- Gravity stabilized flying vehicle Patent  
[NASA-CASE-MS-C-12111-1] c 02 N71-11039
- Solar battery with interconnecting means for plural cells Patent  
[NASA-CASE-XNP-06506] c 03 N71-11050
- Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190
- Multi-feed cone Cassegrain antenna Patent  
[NASA-CASE-NPO-10539] c 07 N71-11285

- Viscous-pendulum-damper Patent  
[NASA-CASE-XLA-02079] c 12 N71-16894
- Out of tolerance warning alarm system for plurality of monitored circuits Patent  
[NASA-CASE-XMS-10984-1] c 10 N71-19417
- Wide range data compression system Patent  
[NASA-CASE-XGS-02612] c 08 N71-19435
- Space suit heat exchanger Patent  
[NASA-CASE-XMS-09571] c 05 N71-19439
- Biomedical radiation detecting probe Patent  
[NASA-CASE-XMS-01177] c 05 N71-19440
- High speed binary to decimal conversion system Patent  
[NASA-CASE-XGS-01230] c 08 N71-19544
- Evaporant source for vapor deposition Patent  
[NASA-CASE-XMF-06065] c 15 N71-20395
- Method and apparatus for making a heat insulating and ablative structure Patent  
[NASA-CASE-XMS-02009] c 33 N71-20834
- Polarization diversity monopulse tracking receiver Patent  
[NASA-CASE-XGS-03501] c 09 N71-20864
- Inflatable support structure Patent  
[NASA-CASE-XLA-01731] c 32 N71-21045
- Fast opening diaphragm Patent  
[NASA-CASE-XLA-03660] c 15 N71-21060
- Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721
- Apparatus for machining geometric cones Patent  
[NASA-CASE-XMS-04292] c 15 N71-22722
- Spin forming tubular elbows Patent  
[NASA-CASE-XMF-01083] c 15 N71-22723
- Spacecraft airlock Patent  
[NASA-CASE-XLA-02050] c 31 N71-22968
- Station keeping of a gravity gradient stabilized satellite Patent  
[NASA-CASE-XLA-03132] c 31 N71-22969
- Filler valve Patent  
[NASA-CASE-XNP-01747] c 15 N71-23024
- Refrigeration apparatus Patent  
[NASA-CASE-XNP-08877] c 15 N71-23025
- Reduced bandwidth video communication system utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c 07 N71-23026
- Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
[NASA-CASE-XMS-02930] c 11 N71-23042
- Variable duration pulse integrator Patent  
[NASA-CASE-XLA-01219] c 10 N71-23084
- Sealed electrochemical cell provided with a flexible casing Patent  
[NASA-CASE-XGS-01513] c 03 N71-23336
- Extended area semiconductor radiation detectors and a novel readout arrangement Patent  
[NASA-CASE-XGS-03230] c 14 N71-23401
- Floating two force component measuring device Patent  
[NASA-CASE-XAC-04885] c 14 N71-23790
- Transducer circuit and catheter transducer Patent  
[NASA-CASE-ARC-10132-1] c 09 N71-24597
- Method of attaching a cover glass to a silicon solar cell Patent  
[NASA-CASE-XLE-08569-2] c 03 N71-24681
- Attitude control system for sounding rockets Patent  
[NASA-CASE-XGS-01654] c 31 N71-24750
- Temperature telemetric transmitter Patent  
[NASA-CASE-NPO-10649] c 07 N71-24840
- Tuning arrangement for an electron discharge device or the like Patent  
[NASA-CASE-XNP-09771] c 09 N71-24841
- Broadband modified turnstile antenna Patent  
[NASA-CASE-MS-C-12209] c 09 N71-24842
- Apparatus for determining the deflection of an electron beam impinging on a target Patent  
[NASA-CASE-XMF-06617] c 09 N71-24843
- BCD to decimal decoder Patent  
[NASA-CASE-XKS-06167] c 08 N71-24890
- Noninterruptable digital counting system Patent  
[NASA-CASE-XNP-09759] c 08 N71-24891
- Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903
- Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904
- Quick release hook tape Patent  
[NASA-CASE-XMS-10680-1] c 15 N71-25975
- Internal work light Patent  
[NASA-CASE-XKS-05932] c 09 N71-26787
- Apparatus for inspecting microfilm Patent  
[NASA-CASE-MFS-20240] c 14 N71-26788
- Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test  
[NASA-CASE-NPO-10778] c 14 N72-11364
- Optimum performance spacecraft solar cell system  
[NASA-CASE-GSC-10669-1] c 03 N72-20031



- Electric storage battery  
[NASA-CASE-NPO-11021] c 03 N72-20032
- Spacecraft attitude control method and apparatus  
[NASA-CASE-HQN-10439] c 21 N72-21624
- Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414
- Flight control system  
[NASA-CASE-MSC-13397-1] c 21 N72-25595
- Program for computer aided reliability estimation  
[NASA-CASE-NPO-13086-1] c 15 N73-12495
- Measurement system  
[NASA-CASE-MFS-20658-1] c 14 N73-30386
- Alignment apparatus using a laser having a gravitationally sensitive cavity reflector  
[NASA-CASE-ARC-10444-1] c 16 N73-33397
- System for calibrating pressure transducer  
[NASA-CASE-LAR-10910-1] c 35 N74-13132
- Three mirror glancing incidence system for X-ray telescope  
[NASA-CASE-MFS-21372-1] c 74 N74-27886
- Holographic system for nondestructive testing  
[NASA-CASE-MFS-21704-1] c 35 N75-25124
- Compact pulsed laser having improved heat conductance  
[NASA-CASE-NPO-13147-1] c 36 N77-25502
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119
- Non-tracking solar energy collector system  
[NASA-CASE-NPO-13813-1] c 44 N78-31526
- Horizontally mounted solar collector  
[NASA-CASE-MFS-23349-1] c 44 N79-23481
- Contour measurement system  
[NASA-CASE-MFS-23726-1] c 43 N79-26439
- Redundant motor drive system  
[NASA-CASE-MFS-23777-1] c 37 N80-32716
- System for sterilizing objects --- cleaning space vehicle systems  
[NASA-CASE-KSC-11085-1] c 54 N81-24724
- A system for controlling the oxygen content of a gas produced by combustion  
[NASA-CASE-LAR-13257-1] c 25 N84-32447
- Multiplex electric discharge gas laser system  
[NASA-CASE-NPO-16433-1] c 36 N86-20778
- SYSTEMS INTEGRATION**
- Liquid hydrogen polygeneration system and process  
[NASA-CASE-KSC-11304-1] c 28 N84-29017

## T

**TABS (CONTROL SURFACES)**

- Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947

**TACHOMETERS**

- Digital cardiachometer system Patent  
[NASA-CASE-XMS-02399] c 05 N71-22896
- Brushless direct current tachometer Patent  
[NASA-CASE-MFS-20385] c 09 N71-24904
- Ratometer  
[NASA-CASE-MFS-20418] c 14 N73-24473
- Tachometer  
[NASA-CASE-MFS-23175-1] c 35 N77-30436
- Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017

**TACKINESS**

- Structural pressure sensitive silicone adhesives  
[NASA-CASE-LAR-13270-1] c 27 N84-32532

**TAIL ASSEMBLIES**

- Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MSC-18422-1] c 37 N82-16408
- Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231

**TAKEOFF**

- Airplane take-off performance indicator Patent  
[NASA-CASE-XLA-00100] c 14 N70-36807
- Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157

**TANGENTS**

- Derivation of a tangent function using an integrated circuit four-quadrant multiplier  
[NASA-CASE-MSC-13907-1] c 10 N73-26230

**TANK GEOMETRY**

- Tank construction for space vehicles Patent  
[NASA-CASE-XMF-01899] c 31 N70-41948

**TANKERS**

- Tanker orbit transfer vehicle and method  
[NASA-CASE-MSC-20543-1] c 18 N84-22610

**TANKS (COMBAT VEHICLES)**

- Improvements in tank tread assemblies  
[NASA-CASE-NPO-16321-1] c 37 N85-29291

**TANKS (CONTAINERS)**

- Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MSC-12280] c 27 N71-16348
- Method for leakage testing of tanks Patent  
[NASA-CASE-XMF-02392] c 32 N71-24285
- Floating baffle to improve efficiency of liquid transfer from tanks  
[NASA-CASE-KSC-10639] c 15 N73-26472
- Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029

**TANTALUM**

- Thermionic tantalum emitter doped with oxygen Patent Application  
[NASA-CASE-NPO-11138] c 03 N70-34646
- Arc electrode of graphite with ball tip Patent  
[NASA-CASE-XLE-04788] c 09 N71-22987
- Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808
- Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454

**TANTALUM ALLOYS**

- Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483
- Tantalum modified ferritic iron base alloys  
[NASA-CASE-LEW-12095-1] c 26 N78-18182

**TANTALUM CARBIDES**

- Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206

**TANTALUM OXIDES**

- Thin film temperature sensor and method of making same  
[NASA-CASE-NPO-11775] c 26 N72-28761

**TAPE RECORDERS**

- Plural recorder system  
[NASA-CASE-XMS-06949] c 09 N69-21467
- Endless tape transport mechanism Patent  
[NASA-CASE-XGS-01223] c 07 N71-10609
- Low friction magnetic recording tape Patent  
[NASA-CASE-XGS-00373] c 23 N71-15978
- Tape guidance system and apparatus for the provision thereof Patent  
[NASA-CASE-XNP-09453] c 08 N71-19420
- Synchronous servo loop control system Patent  
[NASA-CASE-XNP-03744] c 10 N71-20448
- Incremental tape recorder and data rate converter Patent  
[NASA-CASE-XNP-02778] c 08 N71-22710
- Digital telemetry system Patent  
[NASA-CASE-XGS-01812] c 07 N71-23001
- Tape recorder Patent  
[NASA-CASE-XGS-08259] c 14 N71-23698
- Transient video signal recording with expanded playback Patent  
[NASA-CASE-ARC-10003-1] c 09 N71-25866
- A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c 07 N71-33613
- Recorder using selective noise filter  
[NASA-CASE-ERC-10112] c 07 N72-21119
- Scan converting video tape recorder  
[NASA-CASE-NPO-10166-1] c 07 N73-22076
- Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-18391
- Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426

**TAPERED COLUMNS**

- Method of making a rocket motor casing Patent  
[NASA-CASE-XLE-00409] c 28 N71-15658
- Rocket motor casing Patent  
[NASA-CASE-XLE-05689] c 28 N71-15659

**TARGET ACQUISITION**

- Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437
- Target acquisition antenna  
[NASA-CASE-GSC-10064-1] c 10 N72-22235
- Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25180

**TARGET RECOGNITION**

- Electronic background suppression method and apparatus for a field scanning sensor  
[NASA-CASE-XGS-05211] c 07 N69-39980

**TARGET SIMULATORS**

- Simulator method and apparatus for practicing the mating of an observer-controlled object with a target  
[NASA-CASE-MFS-23052-2] c 74 N79-13855
- Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951

**TARGETS**

- Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319

- Method and apparatus for producing gas-filled hollow spheres --- target pellets for inertial confinement fusion  
[NASA-CASE-NPO-14596-3] c 31 N83-31896
- Optical distance measuring instrument  
[NASA-CASE-GSC-12761-1] c 74 N86-32266

**TEETH**

- Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c 52 N82-29862

**TEFLON (TRADEMARK)**

- Bonding of reinforced Teflon to metals  
[NASA-CASE-MFS-20482] c 15 N72-22492
- Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029
- Lead-oxygen dc power supply system having a closed loop oxygen and water system  
[NASA-CASE-MFS-23059-1] c 44 N76-27664

**TELECOMMUNICATION**

- Adaptive compression of communication signals Patent  
[NASA-CASE-XLA-03076] c 07 N71-11266
- Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281
- Signal-to-noise ratio estimating by taking ratio of mean and standard deviation of integrated signal samples Patent  
[NASA-CASE-XNP-05254] c 07 N71-20791
- Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613
- Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917
- Two carrier communication system with single transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118
- Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
[NASA-CASE-XNP-03623] c 09 N73-28084
- Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523
- Pseudo-noise test set for communication system evaluation --- test signals  
[NASA-CASE-MFS-22671-1] c 35 N75-21582
- Modulator for tone and binary signals --- phase of modulation of tone and binary signals on carrier waves in communication systems  
[NASA-CASE-GSC-11743-1] c 32 N75-24981
- Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c 33 N81-15192
- Random digital encryption secure communication system  
[NASA-CASE-MSC-16482-1] c 32 N82-31583

**TELEMETRY**

- Pressure variable capacitor  
[NASA-CASE-XNP-09752] c 14 N69-21541
- Telemetry word forming unit  
[NASA-CASE-XNP-09225] c 09 N69-24333
- Position location and data collection system and method Patent  
[NASA-CASE-GSC-10083-1] c 30 N71-16090
- Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699
- Digitally controlled frequency synthesizer Patent  
[NASA-CASE-XGS-02317] c 09 N71-23525
- Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c 07 N71-24624
- Temperature telemetric transmitter Patent  
[NASA-CASE-NPO-10649] c 07 N71-24840
- Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577
- Telemetry actuated switch  
[NASA-CASE-ARC-10105] c 09 N72-17153
- Flexible computer accessed telemetry  
[NASA-CASE-NPO-11358] c 07 N72-25172
- Digital control and information system  
[NASA-CASE-NPO-11016] c 08 N72-31226
- Multichannel telemetry system  
[NASA-CASE-NPO-11572] c 07 N73-18121
- Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012
- Telemetry synchronizer  
[NASA-CASE-GSC-11868-1] c 17 N76-22245
- A single frequency multitransmitter telemetry system  
[NASA-CASE-LAR-13006-1] c 17 N83-20995
- Memory-based parallel data output controller  
[NASA-CASE-GSC-12447-2] c 60 N84-28491
- Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MSC-20821-1] c 17 N86-20466

## TELEOPERATORS

Cooperative multiaxis sensor for teleoperation of article manipulating apparatus  
[NASA-CASE-NPO-13386-1] c 54 N75-27758

## TELEPHONES

Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310

## TELEPHONY

Digital communication system  
[NASA-CASE-MSC-13912-1] c 32 N74-30524

## TELESCOPES

Pneumatic mirror support system  
[NASA-CASE-XLA-03271] c 11 N69-24321  
Optical tracking mount Patent  
[NASA-CASE-MFS-14017] c 14 N71-26627  
Rotable accurate reflector system for telescopes Patent  
[NASA-CASE-NPO-10468] c 23 N71-33229  
Light direction sensor  
[NASA-CASE-NPO-11201] c 14 N72-27409  
Borescope with variable angle scope  
[NASA-CASE-MFS-15162] c 14 N72-32452  
Ritchey-Chretien Telescope  
[NASA-CASE-GSC-11487-1] c 14 N73-30393  
Servo-controlled intravitral microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123  
Wide-angle flat field telescope  
[NASA-CASE-GSC-12825-1] c 74 N85-20868  
Compensation for primary reflector wavefront error  
[NASA-CASE-NPO-16869-1CU] c 74 N86-33138

## TELETYPEWRITER SYSTEMS

Video communication system and apparatus Patent  
[NASA-CASE-XNP-06611] c 07 N71-26102

## TELEVISION CAMERAS

Electrically-operated rotary shutter Patent  
[NASA-CASE-XNP-00637] c 14 N70-40273  
Digital television camera control system Patent  
[NASA-CASE-XNP-01472] c 14 N70-41807  
Solid state television camera system Patent  
[NASA-CASE-XMF-06092] c 07 N71-24612  
Color television system  
[NASA-CASE-MSC-12146-1] c 07 N72-17109  
TV fatigue crack monitoring system  
[NASA-CASE-LAR-11490-1] c 39 N78-16387  
Optical conversion method --- for spacecraft television  
[NASA-CASE-MSC-12618-1] c 74 N78-17865  
Automatic weld torch guidance control system  
[NASA-CASE-MFS-25807] c 37 N83-20154  
Television camera video level control system  
[NASA-CASE-MSC-18578-1] c 32 N85-21427  
Wind dynamic range video camera  
[NASA-CASE-MFS-25750-1] c 32 N86-20647  
Automated weld torch guidance control system  
[NASA-CASE-MFS-25807-2] c 37 N86-21850

## TELEVISION EQUIPMENT

Television signal scan rate conversion system Patent  
[NASA-CASE-XMS-07168] c 07 N71-11300  
Automatic closed circuit television arc guidance control Patent  
[NASA-CASE-MFS-13046] c 07 N71-19433  
Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618  
Television multiplexing system  
[NASA-CASE-KSC-10654-1] c 07 N73-30115  
Rotating raster generator  
[NASA-CASE-FRC-10071-1] c 32 N74-20813  
Auditory display for the blind  
[NASA-CASE-HQN-10832-1] c 71 N74-21014  
Spacecraft docking and alignment system --- using television camera system  
[NASA-CASE-MSC-12559-1] c 18 N76-14186  
System for producing chroma signals  
[NASA-CASE-MSC-14683-1] c 74 N77-18893

## TELEVISION RECEIVERS

Narrow bandwidth video Patent  
[NASA-CASE-XMS-06740-1] c 07 N71-26579

## TELEVISION RECEPTION

Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117

## TELEVISION SYSTEMS

Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539  
Burst synchronization detection system Patent  
[NASA-CASE-XMS-05605-1] c 10 N71-19468  
Narrow bandwidth video Patent  
[NASA-CASE-XMS-06740-1] c 07 N71-26579  
Stereoscopic television system and apparatus  
[NASA-CASE-ARC-10160-1] c 23 N72-27728

## TELEVISION TRANSMISSION

Television simulation for aircraft and space flight Patent  
[NASA-CASE-XFR-03107] c 09 N71-19449

Automatic frequency control for FM transmitter  
[NASA-CASE-MFS-21540-1] c 32 N74-19790

Television noise reduction device  
[NASA-CASE-MSC-12607-1] c 32 N75-21485

## TELLURIUM

Targets for producing high purity I-123  
[NASA-CASE-LEW-10518-3] c 25 N78-27226

## TEMPERATURE

Fluorinated esters of polycarboxylic acids  
[NASA-CASE-MFS-21040-1] c 06 N73-30098

## TEMPERATURE COMPENSATION

Temperature compensated solid state differential amplifier Patent  
[NASA-CASE-XAC-00435] c 09 N70-35440  
Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00458] c 09 N70-38604  
Matched thermistors for microwave power meters Patent  
[NASA-CASE-NPO-10348] c 10 N71-12554  
Precision thrust gage Patent  
[NASA-CASE-XGS-02319] c 14 N71-22965  
Variable frequency oscillator with temperature compensation Patent  
[NASA-CASE-XNP-03916] c 09 N71-28810  
Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265  
Thermal compensating structural member  
[NASA-CASE-MFS-20433] c 15 N72-28496  
Temperature compensated light source using a light emitting diode  
[NASA-CASE-ARC-10467-1] c 09 N73-14214  
Opto-mechanical subsystem with temperature compensation through isothermal design  
[NASA-CASE-GSC-12059-1] c 35 N77-27366  
Temperature compensated current source  
[NASA-CASE-MSC-11235] c 33 N78-17294

## TEMPERATURE CONTROL

Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343  
Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979  
Thermal control of space vehicles Patent  
[NASA-CASE-XLA-01291] c 33 N70-36617  
Thermal switch Patent  
[NASA-CASE-XNP-00463] c 33 N70-36847  
Sandwich panel construction Patent  
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[NASA-CASE-NPO-10109] c 03 N71-11049  
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[NASA-CASE-XLA-01926] c 14 N71-15620  
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[NASA-CASE-XNP-00920] c 15 N71-15906  
Method and apparatus for controllably heating fluid Patent  
[NASA-CASE-XMF-04237] c 33 N71-16278  
Mount for thermal control system Patent  
[NASA-CASE-NPO-10138] c 33 N71-16357  
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[NASA-CASE-XNP-09775] c 09 N71-20445  
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[NASA-CASE-XLA-01243] c 33 N71-22792  
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[NASA-CASE-XLA-07728] c 33 N71-22890  
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[NASA-CASE-XNP-05524] c 33 N71-24876  
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[NASA-CASE-XNP-02792] c 14 N71-28958  
Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c 05 N72-15098  
Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025  
Atomic hydrogen maser with bulb temperature control to remove wall shift in maser output frequency  
[NASA-CASE-HQN-10654-1] c 16 N73-13489  
Pump for delivering heated fluids  
[NASA-CASE-NPO-11417] c 15 N73-24513  
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[NASA-CASE-ARC-10599-1] c 05 N73-26071  
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[NASA-CASE-NPO-11304] c 14 N73-26430  
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[NASA-CASE-GSC-11018-1] c 31 N73-30829  
Apparatus for controlling the temperature of balloon-borne equipment  
[NASA-CASE-GSC-11620-1] c 34 N74-23039

Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c 77 N75-20140  
Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c 20 N76-14191  
Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c 44 N76-14602  
Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c 34 N78-17337  
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[NASA-CASE-GSC-12168-1] c 31 N79-17029  
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[NASA-CASE-GSC-12553-1] c 34 N83-28356  
Magnetic heat pumping  
[NASA-CASE-LEW-12508-3] c 34 N83-29625  
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[NASA-CASE-LAR-12393-1] c 34 N83-34221  
Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307  
Method and apparatus for minimizing convection during crystal growth from solution  
[NASA-CASE-NPO-15811-1] c 76 N84-12968  
Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461  
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[NASA-CASE-NPO-16022-1] c 71 N85-22105

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Apparatus for supplying conditioned air at a substantially constant temperature and humidity  
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[NASA-CASE-XAC-11225] c 14 N69-27486  
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[NASA-CASE-LEW-12876-2] c 27 N83-29392  
Method for forming hermetic seals  
[NASA-CASE-NPO-16423-1-CU] c 37 N86-19610  
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High performance mixed bisimide resins and composites based thereon  
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Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c 31 N74-18124  
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[NASA-CASE-MFS-25315-1] c 36 N83-29680  
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- Sensing probe  
[NASA-CASE-LEW-10281-1] c 14 N72-17327
- Apparatus for sensing temperature  
[NASA-CASE-XLE-05230] c 14 N72-27410
- Method of making apparatus for sensing temperature  
[NASA-CASE-XLE-05230-2] c 14 N73-13417
- Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428
- Method of fabricating an article with cavities --- with thin bottom walls  
[NASA-CASE-LAR-10318-1] c 31 N74-18089
- Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c 25 N74-18551
- Wind sensor  
[NASA-CASE-NPO-13462-1] c 35 N76-24524
- Miniature ingestible telemeter devices to measure deep-body temperature  
[NASA-CASE-ARC-10583-1] c 52 N76-29894
- Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c 35 N81-26431
- Multi-channel temperature measurement amplification system --- solar heating systems  
[NASA-CASE-MFS-23775-1] c 44 N82-16474
- Solar energy control system --- temperature measurement  
[NASA-CASE-MFS-25287-1] c 44 N82-18686
- Temperature averaging thermal probe  
[NASA-CASE-GSC-12795-1] c 35 N83-20085
- Method of and apparatus for measuring temperature and pressure --- atmospheric sounding  
[NASA-CASE-GSC-12558-1] c 36 N85-21639
- Method of measuring sea surface water temperature with a satellite including wideband passive synthetic-aperture multichannel receiver  
[NASA-CASE-NPO-15651-1] c 43 N85-21723
- Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N85-30201
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624
- TEMPERATURE MEASURING INSTRUMENTS**
- Excessive temperature warning system Patent  
[NASA-CASE-XLA-01926] c 14 N71-15620
- Condition and condition duration indicator Patent  
[NASA-CASE-XMF-01097] c 10 N71-18058
- Thermal detector of electromagnetic energy by means of a vibrating electrode Patent  
[NASA-CASE-XAC-10768] c 09 N71-18830
- Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774
- High intensity radiant energy pulse source having means for opening shutter when light flux has reached a desired level  
[NASA-CASE-ARC-10178-1] c 09 N72-17152
- Thermocouple tape  
[NASA-CASE-LEW-11072-1] c 14 N73-24472
- Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454
- Temperature averaging thermal probe  
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- TEMPERATURE PROBES**
- Temperature-compensating means for cavity resonator of amplifier Patent  
[NASA-CASE-XNP-00449] c 14 N70-35220
- Sensing probe  
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- Temperature averaging thermal probe  
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- Exothermic furnace module  
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- TEMPERATURE SENSORS**
- Compensating radiometer  
[NASA-CASE-XLA-04556] c 14 N69-27484
- Thermobulb mount Patent  
[NASA-CASE-NPO-10158] c 33 N71-16356
- Mount for thermal control system Patent  
[NASA-CASE-NPO-10138] c 33 N71-16357
- Heat flux measuring system Patent  
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- Temperature telemetric transmitter Patent  
[NASA-CASE-NPO-10649] c 07 N71-24840
- Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475
- Thin film capacitive bolometer and temperature sensor Patent  
[NASA-CASE-NPO-10607] c 09 N71-27232
- Thin film temperature sensor and method of making same  
[NASA-CASE-NPO-11775] c 26 N72-28761
- Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-2] c 35 N75-25122
- Optical crystal temperature gauge with fiber optic connections  
[NASA-CASE-MS-C-18627-1] c 74 N82-30071
- Temperature averaging thermal probe  
[NASA-CASE-GSC-12795-1] c 35 N83-20085
- Temperature sensitive oscillator  
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- TEMPLATES**
- Microcircuit negative cutter  
[NASA-CASE-XLA-09843] c 15 N72-27485
- TENSILE STRENGTH**
- Method of making fiber reinforced metallic composites Patent  
[NASA-CASE-XLE-00231] c 17 N70-38198
- Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c 17 N70-38490
- Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c 14 N71-15600
- Method for fiberizing ceramic materials Patent  
[NASA-CASE-XNP-00597] c 18 N71-23088
- Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834
- Device for use in loading tension members --- characterized by elongated elastic body  
[NASA-CASE-MFS-21488-1] c 14 N75-24794
- Method of carbonizing polyacrylonitrile fibers  
[NASA-CASE-ARC-11281-1] c 24 N83-25789
- Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841
- Heat treatment for superalloy  
[NASA-CASE-LEW-14282-1] c 26 N86-26414
- TENSILE STRESS**
- Rocket nozzle test method Patent  
[NASA-CASE-NPO-10311] c 31 N71-15643
- Device for measuring tensile forces  
[NASA-CASE-MFS-21728-1] c 35 N74-27865
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379
- TENSILE TESTS**
- Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c 14 N71-15600
- Tension measurement device Patent  
[NASA-CASE-XMS-04545] c 15 N71-22878
- Tensile strength testing device Patent  
[NASA-CASE-XNP-05634] c 15 N71-24834
- Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test  
[NASA-CASE-NPO-10778] c 14 N72-11364
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c 09 N74-19528
- Method and apparatus for tensile testing of metal foil  
[NASA-CASE-LAR-10208-1] c 35 N76-18400
- Device for tensioning test specimens within an hermetically sealed chamber  
[NASA-CASE-MFS-23281-1] c 35 N77-22450
- Method and apparatus for gripping uniaxial fibrous composite materials  
[NASA-CASE-LEW-13758-1] c 24 N84-27829
- Tensile testing apparatus  
[NASA-CASE-LAR-13243-1] c 35 N85-34375
- Fatigue testing a plurality of test specimens and method  
[NASA-CASE-MFS-28118-1] c 39 N86-32770
- TENSION**
- Meter for use in detecting tension in straps having predetermined elastic characteristics  
[NASA-CASE-MFS-22189-1] c 35 N75-19615
- TERMINAL GUIDANCE**
- Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421
- Terminal guidance system --- for guiding aircraft into preselected altitude and/or heading at terminal point  
[NASA-CASE-FRC-10049-1] c 04 N74-13420
- Terminal guidance sensor system  
[NASA-CASE-NPO-14521-1] c 54 N79-20746
- Terminal guidance sensor system --- space shuttle coupling to orbiting satellites  
[NASA-CASE-NPO-14521-1] c 37 N81-27519
- TERNARY SYSTEMS**
- Nicral ternary alloy having improved cyclic oxidation resistance  
[NASA-CASE-LEW-13339-1] c 26 N82-31505
- TERRAIN**
- Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589
- TERRAIN ANALYSIS**
- Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c 43 N81-17499
- TEST CHAMBERS**
- Exposure system for animals Patent  
[NASA-CASE-XAC-05333] c 11 N71-22875
- Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
[NASA-CASE-XMS-02930] c 11 N71-23042
- Flammability test chamber Patent  
[NASA-CASE-KSC-10126] c 11 N71-24985
- Pressure seal Patent  
[NASA-CASE-NPO-10796] c 15 N71-27068
- Autoignition test cell Patent  
[NASA-CASE-KSC-10198] c 11 N71-28629
- Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992
- Method for measuring biaxial stress in a body subjected to stress inducing loads  
[NASA-CASE-MFS-23299-1] c 39 N72-28511
- Device and method for frictionally testing materials for ignitability  
[NASA-CASE-MS-C-20622-1] c 25 N86-19413
- TEST EQUIPMENT**
- Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391
- Apparatus for tensile testing Patent  
[NASA-CASE-XKS-06250] c 14 N71-15600
- Black-body furnace Patent  
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- Thermocouple assembly Patent  
[NASA-CASE-XNP-01659] c 14 N71-23039
- Automatic fatigue test temperature programmer Patent  
[NASA-CASE-XLA-02059] c 33 N71-24276
- Pulse rise time and amplitude detector Patent  
[NASA-CASE-XMF-08804] c 09 N71-24717
- Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161
- Validation device for spacecraft checkout equipment Patent  
[NASA-CASE-XKS-10543] c 07 N71-26292
- Apparatus for testing wiring harness by vibration generating means  
[NASA-CASE-MS-C-15158-1] c 14 N72-17325
- Atmospheric sampling devices  
[NASA-CASE-NPO-11373] c 13 N72-25323
- Burn rate testing apparatus  
[NASA-CASE-XMS-09690] c 33 N72-25913
- Linear explosive comparison  
[NASA-CASE-LAR-10800-1] c 33 N72-27959
- Apparatus for vibrational testing of articles  
[NASA-CASE-GSC-11302-1] c 14 N73-13416
- Test stand system for vacuum chambers  
[NASA-CASE-MFS-21382] c 11 N73-20267
- Rocket borne instrument to measure electric fields inside electrified clouds  
[NASA-CASE-KSC-10730-1] c 14 N73-32318
- Compression test assembly  
[NASA-CASE-LAR-10440-1] c 14 N73-32323
- Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c 09 N74-17955
- Anti-buckling fatigue test assembly --- for subjecting metal specimen to tensile and compressive loads at constant temperature  
[NASA-CASE-LAR-10426-1] c 09 N74-19528
- Method and apparatus for checking fire detectors  
[NASA-CASE-GSC-11600-1] c 35 N74-21019
- Battery testing device --- for testing cells of multiple-cell battery  
[NASA-CASE-MFS-20761-1] c 44 N74-27519
- Signal conditioner test set  
[NASA-CASE-KSC-10750-1] c 35 N75-12270
- Particulate and aerosol detector  
[NASA-CASE-LAR-11434-1] c 35 N76-22509
- High temperature strain gage calibration fixture  
[NASA-CASE-LAR-11500-1] c 35 N76-24523
- Method of and means for testing a tape record/playback system  
[NASA-CASE-MFS-22671-2] c 35 N77-17426
- Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c 74 N78-15880
- TEST FACILITIES**
- Electric propulsion engine test chamber Patent  
[NASA-CASE-XLE-00252] c 11 N70-34844
- High temperature testing apparatus Patent  
[NASA-CASE-XLE-00335] c 14 N70-35368
- Gas analyzer for bi-gaseous mixtures Patent  
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- Model launcher for wind tunnels Patent  
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- Shock tube bypass piston tunnel  
[NASA-CASE-NPO-12109] c 11 N72-22245
- TEST STANDS**
- Automatic balancing device Patent  
[NASA-CASE-LAR-10774] c 10 N71-13545
- Micro-pound extended range thrust stand Patent  
[NASA-CASE-GSC-10710-1] c 28 N71-27094
- TEST VEHICLES**
- Longwall shearer tracking system  
[NASA-CASE-MFS-25717-1] c 35 N84-33768
- TETHERED SATELLITES**
- Tetherline system for orbiting satellites  
[NASA-CASE-MFS-23564-1] c 15 N78-25119
- TETHERING**
- Cable arrangement for rigid tethering Patent  
[NASA-CASE-XLA-02332] c 32 N71-17609
- Inflatable tether Patent  
[NASA-CASE-XMS-10993] c 15 N71-28936
- TETHERLINES**
- Flexible/rigidifiable cable assembly  
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- Tetherline system for orbiting satellites  
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- Non-backdrivable free wheeling coupling  
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- TETRAETHYL ORTHOSILICATE**
- Thermal protection system  
[NASA-CASE-MSC-18796-1] c 24 N82-26389
- Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c 24 N83-13171
- Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
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- TETRAPHENYLS**
- Metal containing polymers from cyclic tetrameric phenylphosphonitrimides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363
- TEXTILES**
- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
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- TEXTS**
- Braille reading system  
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- TEXTURES**
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- Texturing polymer surfaces by transfer casting --- cardiovascular prosthesis  
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- Ion sputter textured graphite --- anode collector plates in electron tube devices  
[NASA-CASE-LEW-12919-1] c 24 N83-10117
- THERAPY**
- Hyperthermia heating apparatus --- cancer therapy  
[NASA-CASE-NPO-14549-2] c 52 N82-33996
- THERMAL ABSORPTION**
- Constant temperature heat sink for calorimeters Patent  
[NASA-CASE-XMF-04208] c 33 N71-29051
- Solar pond  
[NASA-CASE-NPO-13581-2] c 44 N78-31525
- THERMAL COMFORT**
- Thermal garment  
[NASA-CASE-XMS-03694-1] c 54 N82-29002
- THERMAL CONDUCTIVITY**
- Enthalpy and stagnation temperature determination of a high temperature laminar flow gas stream Patent  
[NASA-CASE-XLE-00266] c 14 N70-34156
- Apparatus for measuring thermal conductivity Patent  
[NASA-CASE-XGS-01052] c 14 N71-15992
- Heated element fluid flow sensor Patent  
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- Method and apparatus for varying thermal conductivity Patent  
[NASA-CASE-XNP-05524] c 33 N71-24876
- Thermally conductive polymers  
[NASA-CASE-GSC-11304-1] c 06 N72-21105
- Electrostatically controlled heat shutter  
[NASA-CASE-NPO-11942-1] c 33 N73-32818
- Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c 34 N78-18355
- Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c 32 N80-32605
- Automatic thermal switch --- spacecraft applications  
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- Thermal conductive connection and method of making same Patent  
[NASA-CASE-XMS-02087] c 09 N70-41717
- Solar energy absorber  
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- THERMAL CONTROL COATINGS**
- Thermal control coating Patent  
[NASA-CASE-XLA-01995] c 18 N71-23047
- Stabilized zinc oxide coating compositions Patent  
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- Inorganic thermal control coatings  
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- Polymeric vehicles as carriers for sulfonic acid salt of nitrosubstituted aromatic amines  
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[NASA-CASE-MFS-22324-1] c 27 N75-27160
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[NASA-CASE-LAR-10805-2] c 34 N77-18382
- Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c 27 N77-30237
- Intumescent coatings containing 4,4'-dinitrosulfanilide  
[NASA-CASE-ARC-11042-1] c 24 N78-14096
- Thermal barrier coating system  
[NASA-CASE-LEW-12554-1] c 34 N78-18355
- High temperature resistant cermet and ceramic compositions --- for thermal resistant insulators and refractory coatings  
[NASA-CASE-NPO-13690-1] c 27 N78-19302
- Intumescent-ablative coatings using endothermic fillers  
[NASA-CASE-ARC-11043-1] c 24 N78-27180
- Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c 33 N79-12331
- Electrically conductive thermal control coatings  
[NASA-CASE-GSC-12207-1] c 24 N79-14156
- Improved thermal barrier coating system  
[NASA-CASE-LEW-13324-1] c 26 N82-26431
- High temperature emittance coatings and coating compositions --- repairing damaged space shuttle tiles in space  
[NASA-CASE-MSC-18851-1] c 27 N82-26460
- High temperature glass thermal control structure and coating --- for application to spacecraft reusable heat shielding  
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- Variable anodic thermal control coating  
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- THERMAL DEGRADATION**
- Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146
- Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186
- THERMAL DIFFUSIVITY**
- Double-beam optical method and apparatus for measuring thermal diffusivity and other molecular dynamic processes in utilizing the transient thermal lens effect  
[NASA-CASE-NPO-14657-1] c 74 N81-17887
- THERMAL EMISSION**
- Electromagnetic radiation energy arrangement --- coatings for solar energy absorption and infrared reflection  
[NASA-CASE-WOO-00428-1] c 32 N79-19186
- Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178
- THERMAL ENERGY**
- Energy conversion apparatus Patent  
[NASA-CASE-XLE-00212] c 03 N70-34134
- Device for directionally controlling electromagnetic radiation Patent  
[NASA-CASE-XLE-01716] c 09 N70-40234
- Thermally activated foaming compositions Patent  
[NASA-CASE-LAR-10373-1] c 18 N71-26155
- Gas core nuclear reactor Patent  
[NASA-CASE-LEW-10250-1] c 22 N71-28759
- Electrostatically controlled heat shutter  
[NASA-CASE-NPO-11942-1] c 33 N73-32818
- Solid medium thermal engine  
[NASA-CASE-ARC-10461-1] c 44 N74-33379
- Panel for selectively absorbing solar thermal energy and the method of producing said panel  
[NASA-CASE-MFS-22562-1] c 44 N76-14595
- Thermal energy storage system --- operating on superheating of liquids  
[NASA-CASE-MFS-23167-1] c 44 N76-31667
- Low to high temperature energy conversion system  
[NASA-CASE-NPO-13510-1] c 44 N77-32581
- Thermal energy transformer  
[NASA-CASE-NPO-14058-1] c 44 N79-18443
- Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029

- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389
- THERMAL EXPANSION**
- Thermally operated valve Patent  
[NASA-CASE-XLE-00815] c 15 N70-35407
- Adjustable mount for a trihedral mirror Patent  
[NASA-CASE-XNP-08907] c 23 N71-29123
- Thermal motor  
[NASA-CASE-NPO-11283] c 09 N72-25260
- Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063
- Daze fasteners  
[NASA-CASE-LAR-13009-1] c 37 N85-29285
- THERMAL FATIGUE**
- Automatic fatigue test temperature programmer Patent  
[NASA-CASE-XLA-02059] c 33 N71-24276
- THERMAL INSULATION**
- Piping arrangement through a double chamber structure  
[NASA-CASE-XNP-08882] c 15 N69-39935
- Insulating structure Patent  
[NASA-CASE-XMF-00341] c 15 N70-33323
- Unfired-ceramic flame-resistant insulation and method of making the same Patent  
[NASA-CASE-XMF-01030] c 18 N70-41583
- Techniques for insulating cryogenic fuel containers Patent  
[NASA-CASE-XLA-01967] c 31 N70-42015
- Lightweight refractory insulation and method of preparing the same Patent  
[NASA-CASE-XMF-05279] c 18 N71-16124
- Heat protection apparatus Patent  
[NASA-CASE-XLA-00892] c 33 N71-17897
- Cryogenic insulation system Patent  
[NASA-CASE-XLE-04222] c 23 N71-22881
- Insulation system Patent  
[NASA-CASE-XLE-02647] c 18 N71-23658
- Filament wound container Patent  
[NASA-CASE-XLE-03803] c 15 N71-23816
- Panelized high performance multilayer insulation Patent  
[NASA-CASE-MFS-14023] c 33 N71-25351
- Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353
- Fabric for micrometeoroid protection garment Patent  
[NASA-CASE-MSC-12109] c 18 N71-26285
- Thickness measuring and injection device Patent  
[NASA-CASE-MFS-20261] c 14 N71-27005
- Cryogenic thermal insulation Patent  
[NASA-CASE-XMF-05046] c 33 N71-28892
- Intumescent composition, foamed product prepared therewith, and process for making same  
[NASA-CASE-ARC-10304-1] c 18 N73-26572
- Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829
- Heater-mixer for stored fluids  
[NASA-CASE-ARC-10442-1] c 35 N74-15093
- Intumescent composition, foamed product prepared therewith and process for making same  
[NASA-CASE-ARC-10304-2] c 27 N74-27037
- High current electrical lead --- for thermionic converters  
[NASA-CASE-LEW-10950-1] c 33 N74-27683
- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c 34 N75-12222
- Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c 27 N76-14264
- Auger attachment method for insulation --- of spacecraft  
[NASA-CASE-MSC-12615-1] c 37 N76-19437
- Flexible pile thermal barrier insulator  
[NASA-CASE-MSC-19568-1] c 34 N78-25350
- Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c 27 N79-12221
- Fibrous refractory composite insulation --- shielding reusable spacecraft  
[NASA-CASE-ARC-11169-1] c 24 N79-24062
- Thermal insulation protection means  
[NASA-CASE-MSC-12737-1] c 24 N79-25142
- Installing fiber insulation  
[NASA-CASE-MSC-16973-1] c 37 N81-14317
- Process for the preparation of polycarbonylphosphazenes --- thermal insulation  
[NASA-CASE-ARC-11176-2] c 27 N81-27271
- Carbonylphosphazenes and their polymers --- thermal insulation  
[NASA-CASE-ARC-11176-1] c 27 N82-18389
- A method and technique for installing light-weight fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-18934-3] c 24 N82-26387

- Thermal garment  
[NASA-CASE-XMS-03694-1] c 54 N82-29002
- Method and technique for installing light-weight, fragile, high-temperature fiber insulation  
[NASA-CASE-MSC-16934-3] c 24 N84-16262
- Insulation bonding test system  
[NASA-CASE-MFS-25862-1] c 27 N85-20126
- Cryogenic insulation strength and bond tester  
[NASA-CASE-MFS-25910-1] c 39 N86-20841
- THERMAL PLASMAS**  
Continuous plasma light source  
[NASA-CASE-XNP-04167-2] c 25 N72-24753
- THERMAL PROTECTION**  
Thermo-protective device for balances Patent  
[NASA-CASE-XAC-00648] c 14 N70-40400
- Ablation structures Patent  
[NASA-CASE-XMS-01816] c 33 N71-15623
- Spacecraft radiator cover Patent  
[NASA-CASE-MSC-12049] c 31 N71-16080
- Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c 18 N71-22998
- Ceramic insulation for radiant heating environments and method of preparing the same Patent  
[NASA-CASE-MFS-14253] c 33 N71-24858
- Solid state thermal control polymer coating Patent  
[NASA-CASE-XLA-01745] c 33 N71-28903
- Temperature reducing coating for metals subject to flame exposure Patent  
[NASA-CASE-XLE-00035] c 33 N71-29151
- Stand-off type ablative heat shield  
[NASA-CASE-MSC-12143-1] c 33 N72-17947
- Flexible fire retardant foam  
[NASA-CASE-ARC-10180-1] c 28 N72-20767
- Flexible fire retardant polyisocyanate modified neoprene foam --- for thermal protective devices  
[NASA-CASE-ARC-10180-1] c 27 N74-12814
- Adjustable securing base  
[NASA-CASE-MSC-19666-1] c 37 N78-17383
- Reaction cured glass and glass coatings  
[NASA-CASE-ARC-11051-1] c 27 N78-32260
- Corrosion resistant thermal barrier coating --- protecting gas turbines and other engine parts  
[NASA-CASE-LEW-13088-1] c 26 N81-25188
- Thermal protection system  
[NASA-CASE-MSC-18796-1] c 24 N82-26389
- Attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c 27 N82-29456
- Multilayer thermal protection system  
[NASA-CASE-LAR-12620-1] c 24 N82-32417
- High temperature silicon carbide impregnated insulating fabrics  
[NASA-CASE-MSC-18832-1] c 27 N83-18908
- Silicon-slurry/aluminide coating --- protecting gas turbine engine vanes and blades  
[NASA-CASE-LEW-13343] c 26 N83-31795
- Thermal barrier coating system having improved adhesion  
[NASA-CASE-LEW-1335901] c 27 N83-31855
- Covering solid, film cooled surfaces with a duplex thermal barrier coating  
[NASA-CASE-LEW-13450-1] c 31 N83-35177
- Pre-stressed thermal protection systems  
[NASA-CASE-MSC-20254-1] c 16 N84-22601
- Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N85-20128
- Process for preparing highly optically transparent-colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-21360
- Propulsion apparatus and method using boil-off gas from a cryogenic liquid  
[NASA-CASE-MFS-25946-1] c 20 N86-26368
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N86-32740
- THERMAL RADIATION**  
Compensating radiometer  
[NASA-CASE-XLA-04556] c 14 N69-27484
- Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c 14 N69-39937
- High temperature heat source Patent  
[NASA-CASE-XLE-00490] c 33 N70-34545
- Thermal radiation shielding Patent  
[NASA-CASE-XLE-03432] c 33 N71-24145
- Cavity radiometer Patent  
[NASA-CASE-XNP-08961] c 14 N71-24809
- Method and construction for protecting heat sensitive bodies from thermal radiation and convective heat Patent  
[NASA-CASE-XNP-01310] c 33 N71-28852
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA 1.71-NPO-15494-2] c 35 N85-34373
- THERMAL REACTORS**  
Non-equilibrium radiation nuclear reactor  
[NASA-CASE-HQN-10841-1] c 73 N78-19920
- THERMAL RESISTANCE**  
Diode and protection fuse unit Patent  
[NASA-CASE-XKS-03381] c 09 N71-22796
- Polyimide foam for the thermal insulation and fire protection  
[NASA-CASE-ARC-10464-1] c 27 N74-12812
- Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c 34 N74-15652
- Self-regulating proportionally controlled heating apparatus and technique  
[NASA-CASE-GSC-11752-1] c 77 N75-20140
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c 27 N78-32256
- Ambient cure polyimide foams --- thermal resistant foams  
[NASA-CASE-ARC-11170-1] c 27 N79-11215
- The 1,2,4-oxadiazole elastomers --- heat resistant polymers  
[NASA-CASE-ARC-11253-1] c 27 N81-17262
- Surface conforming thermal/pressure seal --- tail assemblies of space shuttle orbiters  
[NASA-CASE-MSC-18422-1] c 37 N82-16408
- Amine terminated bisacrylamides, process for preparation thereof, and polymers thereof  
[NASA-CASE-ARC-11421-1] c 27 N84-16340
- Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-2] c 54 N84-23113
- Heat resistant protective hand covering  
[NASA-CASE-MSC-20261-1] c 54 N84-28484
- Thermal barrier coating system  
[NASA-CASE-LEW-13324-2] c 24 N85-21266
- Fire resistant polymers based on 1-(diorgano oxophosphoryl)methyl-2,4- and 2,6-diaminobenzenes  
[NASA-CASE-ARC-11512-2] c 27 N85-21362
- Fire and heat resistant laminating resins based on maleimide and citraconimide substituted 1-(diorgano oxophosphoryl)methyl-2,4- and 2,6-diaminobenzenes  
[NASA-CASE-ARC-11533-1] c 27 N85-21364
- High temperature polyimide film laminates and process for preparation thereof  
[NASA-CASE-LAR-13384-1] c 27 N86-20561
- Flexible diaphragm: Extreme temperature usage  
[NASA-CASE-MSC-20787-1] c 37 N86-20806
- Fire resistant polyamide based on 1-(diorgano oxophosphoryl)methyl-2,4- and 2,6-diaminobenzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568
- THERMAL SHOCK**  
Thermal shock apparatus Patent  
[NASA-CASE-XLE-02024] c 14 N71-22984
- Thermal shock resistant hafnia ceramic material  
[NASA-CASE-LAR-10894-1] c 18 N73-14584
- Thermal shock and erosion resistant tantalum carbide ceramic material  
[NASA-CASE-LAR-11902-1] c 27 N78-17206
- Laser surface fusion of plasma sprayed ceramic turbine seals  
[NASA-CASE-LEW-13269-1] c 18 N83-20996
- THERMAL SIMULATION**  
Thermopile vacuum gage tube simulator Patent  
[NASA-CASE-XLA-02758] c 14 N71-18481
- THERMAL STABILITY**  
Bonded solid lubricant coating Patent  
[NASA-CASE-XMS-00259] c 18 N70-36400
- Portable environmental control system Patent  
[NASA-CASE-XMS-09632-1] c 05 N71-11203
- Metal containing polymers from cyclic tetrameric phenylphosphonitrimides Patent  
[NASA-CASE-HQN-10364] c 06 N71-27363
- Method of making a cermet Patent  
[NASA-CASE-LEW-10219-1] c 18 N71-28729
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N78-32315
- Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c 71 N79-14871
- Infusible silazane polymer and process for producing same --- protective coatings  
[NASA-CASE-XMF-02526-1] c 27 N79-21190
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307
- Aluminum ion-containing polyimide adhesives  
[NASA-CASE-LAR-12640-1] c 27 N82-11206
- Low temperature cross linking polyimides  
[NASA-CASE-LEW-12876-2] c 27 N83-29392
- Process for preparing phthalocyanine polymers  
[NASA-CASE-ARC-11511-1] c 23 N84-16259
- Metal phthalocyanine polymers  
[NASA-CASE-ARC-11405-1] c 27 N84-27884
- High temperature resistant polyimide from tetra ester, diamine, diester and N-arylnadimide  
[NASA-CASE-LEW-13864-1] c 27 N86-19457
- Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-2] c 27 N86-21675
- Sulfone-ester polymers containing pendent ethynyl groups  
[NASA-CASE-LAR-13316-1] c 27 N86-27450
- THERMAL STRESSES**  
Strain gage Patent Application  
[NASA-CASE-FRC-10053] c 14 N70-35587
- Multilegged support system Patent  
[NASA-CASE-XLA-01326] c 11 N71-21481
- Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877
- Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c 07 N79-10057
- Method for alleviating thermal stress damage in laminates --- metal matrix composites  
[NASA-CASE-LEW-12493-1] c 24 N81-17170
- Method for alleviating thermal stress damage in laminates  
[NASA-CASE-LEW-12493-2] c 24 N81-26179
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674
- Daze fasteners  
[NASA-CASE-LAR-13009-1] c 37 N85-29285
- Thermal stress minimized, two component, turbine shroud seal  
[NASA-CASE-LEW-14212-1] c 37 N86-32740
- THERMIONIC CATHODES**  
Cavity emitter for thermionic converter Patent  
[NASA-CASE-NPO-10412] c 09 N71-28421
- THERMIONIC CONVERTERS**  
Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898
- Thermionic converter with current augmented by self induced magnetic field Patent  
[NASA-CASE-XLE-01903] c 22 N71-23599
- Cavity emitter for thermionic converter Patent  
[NASA-CASE-NPO-10412] c 09 N71-28421
- Solar cell Patent  
[NASA-CASE-ARC-10050] c 03 N71-33409
- Uninsulated in-core thermionic diode  
[NASA-CASE-NPO-10542] c 09 N72-27228
- High current electrical lead --- for thermionic converters  
[NASA-CASE-LEW-10950-1] c 33 N74-27683
- Electric power generation system directory from laser power  
[NASA-CASE-NPO-13308-1] c 36 N75-30524
- Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c 73 N77-18891
- High thermal power density heat transfer --- thermionic converters  
[NASA-CASE-LEW-12950-1] c 34 N82-11399
- Thermionic energy converters  
[NASA-CASE-LEW-12443-1] c 44 N83-32175
- THERMIONIC DIODES**  
Heat pipe thermionic diode power system Patent  
[NASA-CASE-XMF-05843] c 03 N71-11055
- Thermionic diode switch Patent  
[NASA-CASE-NPO-10404] c 03 N71-12255
- Micro current measuring device using plural logarithmic response heated filamentary type diodes Patent  
[NASA-CASE-XNP-00384] c 09 N71-13530
- Power system with heat pipe liquid coolant lines Patent  
[NASA-CASE-MFS-14114] c 33 N71-27862
- Uninsulated in-core thermionic diode  
[NASA-CASE-NPO-10542] c 09 N72-27228
- THERMIONIC EMITTERS**  
Thermionic tantalum emitter doped with oxygen Patent Application  
[NASA-CASE-NPO-11138] c 03 N70-34646
- THERMIONIC POWER GENERATION**  
Control for nuclear thermionic power source  
[NASA-CASE-NPO-13114-2] c 73 N78-28913
- High thermal power density heat transfer apparatus providing electrical isolation at high temperature using heat pipes  
[NASA-CASE-LEW-12950-2] c 34 N85-29179
- Thermionic photovoltaic energy converter  
[NASA-CASE-LEW-14077-1] c 44 N85-34441

## THERMISTORS

- Matched thermistors for microwave power meters Patent  
[NASA-CASE-NPO-10348] c 10 N71-12554  
Thermistor holder for skin temperature measurements  
[NASA-CASE-ARC-10855-1] c 52 N77-10780  
Wedge immersed thermistor bolometers  
[NASA-CASE-XGS-01245-1] c 35 N79-33449

## THERMOCHEMISTRY

- Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N82-28368

## THERMOCHROMATIC MATERIALS

- Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428  
Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-2] c 35 N75-25122

## THERMOCOUPLE PYROMETERS

- Dual measurement ablation sensor  
[NASA-CASE-LAR-10105-1] c 34 N74-15652

## THERMOCOUPLES

- Heat flux sensor assembly  
[NASA-CASE-XMS-05909-1] c 14 N69-27459  
Gas cooled high temperature thermocouple Patent  
[NASA-CASE-XLE-09475-1] c 33 N71-15568  
Weld control system using thermocouple wire Patent  
[NASA-CASE-MFS-06074] c 15 N71-20393  
Heat sensing instrument Patent  
[NASA-CASE-XLA-01551] c 14 N71-22989  
Thermocouple assembly Patent  
[NASA-CASE-XNP-01659] c 14 N71-23039  
Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199  
Apparatus for sensing temperature  
[NASA-CASE-XLE-05230] c 14 N72-27410  
Method of making apparatus for sensing temperature  
[NASA-CASE-XLE-05230-2] c 14 N73-13417  
Butt welder for fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c 15 N73-14468  
Thermocouple tape  
[NASA-CASE-LEW-11072-1] c 14 N73-24472  
Thermocouple tape --- developed from thermoelectrically different metals  
[NASA-CASE-LEW-11072-2] c 35 N76-15434  
Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409  
Thermocouples of tantalum and rhenium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12050-1] c 35 N77-32454  
Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346  
Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c 35 N81-26431  
Solar energy control system --- temperature measurement  
[NASA-CASE-MFS-25287-1] c 44 N82-18686  
Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338

## THERMODYNAMIC CYCLES

- Solar engine  
[NASA-CASE-LAR-12148-1] c 44 N82-24640

## THERMODYNAMIC EFFICIENCY

- Automatic compression adjusting mechanism for internal combustion engines  
[NASA-CASE-MSC-18807-1] c 37 N83-36483

## THERMODYNAMIC PROPERTIES

- Thermal shock apparatus Patent  
[NASA-CASE-XLE-02024] c 14 N71-22964  
Foamed in place ceramic refractory insulating material Patent  
[NASA-CASE-XGS-02435] c 18 N71-22998  
Superconducting magnet Patent  
[NASA-CASE-XNP-06503] c 23 N71-29049  
Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415  
High stability amplifier  
[NASA-CASE-GSC-12646-1] c 33 N83-34191  
Chemical approach for controlling nadimide cure temperature and rate  
[NASA-CASE-LEW-13770-5] c 27 N85-21352  
Fire resistant polyamide based on 1-(diorganoxyphosphoryl)methyl-2,4- and -2,6diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568

## THERMOELECTRIC GENERATORS

- Protection for energy conversion systems  
[NASA-CASE-XGS-04808] c 03 N69-25146  
Segmenting lead telluride-silicon germanium thermoelements Patent  
[NASA-CASE-XGS-05718] c 26 N71-16037  
Integrated thermoelectric generator/space antenna combination  
[NASA-CASE-XER-09521] c 09 N72-12136  
Thermally cascaded thermoelectric generator  
[NASA-CASE-NPO-10753] c 03 N72-26031

## THERMOELECTRIC MATERIALS

- Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786  
Segmenting lead telluride-silicon germanium thermoelements Patent  
[NASA-CASE-XGS-05718] c 26 N71-16037  
Stabilized lanthanum sulphur compounds --- thermoelectric materials  
[NASA-CASE-NPO-16135-1] c 25 N83-24572

## THERMOELECTRIC POWER GENERATION

- Two-fluid magnetohydrodynamic system and method for thermal-electric power conversion Patent  
[NASA-CASE-XNP-00644] c 03 N70-36803  
Combined electrolysis device and fuel cell and method of operation Patent  
[NASA-CASE-XLE-01645] c 03 N71-20904  
Thermoelectric power system --- for spacecraft  
[NASA-CASE-MFS-22002-1] c 44 N76-16612

## THERMOELECTRICITY

- Thermocouple tape  
[NASA-CASE-LEW-11072-1] c 14 N73-24472  
Apparatus and method for measuring the Seebeck coefficient and resistivity of materials  
[NASA-CASE-NPO-11749] c 14 N73-28486

## THERMOLUMINESCENCE

- Method of detecting oxygen in a gas  
[NASA-CASE-LAR-10668-1] c 06 N73-16106  
Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c 25 N78-15210

## THERMOMAGNETIC EFFECTS

- Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
[NASA-CASE-NPO-11317-2] c 36 N74-13205  
Thermomagnetic recording and magnetic-optic playback system  
[NASA-CASE-NPO-10872-1] c 35 N79-16246

## THERMOMETERS

- Platinum resistance thermometer circuit  
[NASA-CASE-MSC-12327-1] c 35 N77-27368  
Temperature sensitive oscillator  
[NASA-CASE-GSC-12958-1] c 33 N86-32624

## THERMOPHYSICAL PROPERTIES

- Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c 25 N74-18551  
Apparatus for determining thermophysical properties of test specimens  
[NASA-CASE-LAR-11883-1] c 09 N77-27131

## THERMOPILES

- Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598  
Horizon sensor with a plurality of fixedly positioned radiation compensated radiation sensitive detectors Patent  
[NASA-CASE-XNP-06957] c 14 N71-21088  
Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447

## THERMOPLASTIC FILMS

- Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708  
Hot melt recharge system --- repairing damaged or missing tiles on space shuttle orbiter  
[NASA-CASE-LAR-12881-1] c 27 N84-14323  
Heat sealable, flame and abrasion resistant coated fabric  
[NASA-CASE-MSC-18382-2] c 27 N84-14324  
Induction heating gun  
[NASA-CASE-LAR-13181-1] c 31 N85-29083

## THERMOPLASTIC RESINS

- Boron trifluoride coatings for thermoplastic materials and method of applying same in glow discharge  
[NASA-CASE-ARC-11057-1] c 27 N78-31233  
Thermoplastic rubber comprising ethylene-vinyl acetate copolymer, asphalt and fluxing oil  
[NASA-CASE-NPO-08835-1] c 27 N78-33228  
Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076  
Method of making formulated plastic separators for soluble electrode cells  
[NASA-CASE-LEW-12358-2] c 25 N82-21268  
One-step dual purpose joining technique  
[NASA-CASE-LAR-12595-1] c 33 N82-26571  
Advanced inorganic separators for alkaline batteries  
[NASA-CASE-LEW-13171-1] c 44 N82-29708  
Advanced inorganic separators for alkaline batteries and method of making the same  
[NASA-CASE-LEW-13171-2] c 44 N83-32176  
Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups --- for thermoplastic resins  
[NASA-CASE-LAR-12838-1] c 27 N83-34040

- Solvent resistant thermoplastic aromatic poly(imidesulfone) and process for preparing same  
[NASA-CASE-LAR-12858-1] c 27 N83-34041  
Ethynyl and substituted ethynyl-terminated polysulfones  
[NASA-CASE-LAR-12931-1] c 27 N84-22747  
Hot melt adhesive attachment pad  
[NASA-CASE-LAR-12894-1] c 27 N85-20125  
Phenoxy resins containing pendent ethynyl groups and cured resins obtained therefrom  
[NASA-CASE-LAR-13262-1] c 23 N85-28973  
Process for crosslinking and extending conjugated diene-containing polymers  
[NASA-CASE-LAR-13452-1] c 27 N86-25477

## THERMOPLASTICITY

- Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c 27 N78-32261  
Heat sealable, flame and abrasion resistant coated fabric --- clothing and containers for space exploration  
[NASA-CASE-MSC-18382-1] c 27 N82-16238  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-2] c 27 N84-22746  
Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups  
[NASA-CASE-LAR-12723-1] c 27 N85-20123  
Process for preparing solvent resistant, thermoplastic aromatic poly(imidesulfone)  
[NASA-CASE-LAR-12858-2] c 27 N85-20124  
Thermoplastics/thermosetting adhesive specimen bonding  
[NASA-CASE-LAR-13066-1] c 27 N86-20564  
Copolyimides with a combination of flexibilizing groups  
[NASA-CASE-LAR-13354-1] c 27 N86-20566

## THERMOREGULATION

- Garments for controlling the temperature of the body Patent  
[NASA-CASE-XMS-10269] c 05 N71-24147

## THERMOSETTING RESINS

- Method for molding compounds Patent  
[NASA-CASE-XLA-01091] c 15 N71-10672  
Method and apparatus for bonding a plastics sleeve onto a metallic body Patent  
[NASA-CASE-XLA-01262] c 15 N71-21404  
Honeycomb panel and method of making same Patent  
[NASA-CASE-XMF-01402] c 18 N71-21651  
Method of forming shapes from planar sheets of thermosetting materials  
[NASA-CASE-NPO-11036] c 15 N72-24522  
Highly fluorinated polyurethanes  
[NASA-CASE-NPO-10767-2] c 06 N72-27151  
Evacuated displacement compression molding  
[NASA-CASE-LAR-10782-1] c 31 N74-14133  
Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c 31 N74-18124  
Evacuated, displacement compression mold --- of tubular bodies from thermosetting plastics  
[NASA-CASE-LAR-10782-2] c 31 N75-13111  
Cork-resin ablative insulation for complex surfaces and method for applying the same  
[NASA-CASE-MFS-23626-1] c 24 N80-26388  
Polymeric compositions and their method of manufacture --- forming filled polymer systems using cryogenics  
[NASA-CASE-NPO-10424-1] c 27 N81-24258  
Elastomer toughened polyimide adhesives  
[NASA-CASE-LAR-12775-1] c 27 N83-28240  
Cellular thermosetting fluoropolymers and process for making them  
[NASA-CASE-GSC-13008-1] c 27 N86-32570

## THERMOSTATS

- Thermal switch Patent  
[NASA-CASE-XNP-00463] c 33 N70-36847  
Thermostatic actuator  
[NASA-CASE-NPO-10637] c 15 N72-12409  
Thermostatically controlled non-tracking type solar energy concentrator  
[NASA-CASE-NPO-13497-1] c 44 N76-14602

## THICK FILMS

- Screened circuit capacitors  
[NASA-CASE-LAR-10294-1] c 26 N72-28762

## THICKNESS

- Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895  
Thickness measurement system  
[NASA-CASE-MFS-23721-1] c 31 N79-28370  
Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c 27 N80-16163

## THIN FILMS

- Temperature sensitive capacitor device  
[NASA-CASE-XNP-09750] c 14 N69-39937



Means and methods of depositing thin films on substrates Patent  
[NASA-CASE-XNP-00595] c 15 N70-34967

Method of forming thin window drifted silicon charged particle detector Patent  
[NASA-CASE-XLE-00808] c 24 N71-10560

Vacuum deposition apparatus Patent  
[NASA-CASE-XMF-01667] c 15 N71-17647

GaAs solar detector using manganese as a doping agent Patent  
[NASA-CASE-XNP-01328] c 26 N71-18064

Stable amplifier having a stable quiescent point Patent  
[NASA-CASE-XGS-02812] c 09 N71-19466

Evaporator source for vapor deposition Patent  
[NASA-CASE-XMF-00865] c 15 N71-20395

Method of electrolytically binding a layer of semiconductors together Patent  
[NASA-CASE-XNP-01959] c 26 N71-23043

Vacuum evaporator with electromagnetic ion steering Patent  
[NASA-CASE-NPO-10331] c 09 N71-26701

Magnetic recording head and method of making same Patent  
[NASA-CASE-GSC-10087-1] c 08 N71-27210

Thin film capacitive bolometer and temperature sensor Patent  
[NASA-CASE-NPO-10607] c 09 N71-27232

Microelectronic module package Patent  
[NASA-CASE-XMS-02182] c 10 N71-28783

Fabrication of single crystal film semiconductor devices  
[NASA-CASE-ERC-10222] c 09 N72-22199

Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170

Light regulator  
[NASA-CASE-LAR-10836-1] c 26 N72-27784

Thin film microwave iris  
[NASA-CASE-LAR-10511-1] c 09 N72-29172

Method of forming transparent films of ZnO  
[NASA-CASE-FRC-10019] c 15 N73-12487

Light intensity strain analysis  
[NASA-CASE-LAR-10785-1] c 32 N73-20740

Monitoring deposition of films  
[NASA-CASE-MFS-20675] c 26 N73-26751

Holographic thin film analyzer  
[NASA-CASE-MFS-20823-1] c 16 N73-30476

Transparent switchboard  
[NASA-CASE-MSC-13748-1] c 10 N73-32143

Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c 25 N74-18551

Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c 25 N75-12087

System for depositing thin films  
[NASA-CASE-MFS-20775-1] c 31 N75-12161

Method of producing a storage bulb for an atomic hydrogen maser  
[NASA-CASE-NPO-13050-1] c 36 N75-15029

Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c 31 N76-31365

Method of forming metal hydride films  
[NASA-CASE-LEW-12083-1] c 37 N76-13436

Strong thin membrane structure --- solar sails  
[NASA-CASE-NPO-14021-2] c 27 N80-16163

Method of forming dynamic membrane on stainless steel support  
[NASA-CASE-MSC-18172-1] c 26 N80-19237

Partial interlaminar separation system for composites  
[NASA-CASE-LAR-12085-1] c 24 N81-14000

Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015

Integrating IR detector imaging systems  
[NASA-CASE-NPO-15805-1] c 74 N84-28590

Glass heating panels and method for preparing the same from architectural reflective glass  
[NASA-CASE-NPO-15753-1] c 27 N84-33589

Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112

Deposition of diamondlike carbon films  
[NASA-CASE-LEW-14080-1] c 31 N85-20153

A method and apparatus for making an optical element having a dielectric film  
[NASA-CASE-ARC-11611-1] c 74 N86-20128

Method of producing high T superconducting NbN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N86-21401

**THIN PLATES**

Dichroic plate --- as bandpass filters  
[NASA-CASE-NPO-13506-1] c 35 N76-15435

Adjustable securing base  
[NASA-CASE-MSC-19666-1] c 37 N78-17383

**THIN WALLED SHELLS**

Thin-walled pressure vessel Patent  
[NASA-CASE-XLE-04677] c 15 N71-10577

**THIN WALLS**

Channel-type shell construction for rocket engines and the like Patent  
[NASA-CASE-XLE-00144] c 28 N70-34860

Sealed separable connection Patent  
[NASA-CASE-NPO-10064] c 15 N71-17693

Low mass truss structure  
[NASA-CASE-LAR-10546-1] c 11 N72-25287

Differential pressure control  
[NASA-CASE-MFS-14216] c 14 N73-13418

Method of fabricating an article with cavities --- with thin bottom walls  
[NASA-CASE-LAR-10318-1] c 31 N74-18089

Method of fabricating an object with a thin wall having a precisely shaped slit  
[NASA-CASE-LAR-10409-1] c 31 N74-21059

**THORIUM FLUORIDES**

Ultraviolet filter  
[NASA-CASE-XNP-02340] c 23 N69-24332

**THORIUM OXIDES**

Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c 73 N77-16891

**THREADS**

Inspection gage for boss Patent  
[NASA-CASE-XMF-04966] c 14 N71-17658

Threadless fastener apparatus Patent  
[NASA-CASE-XFR-05302] c 15 N71-23254

**THREE AXIS STABILIZATION**

Three axis attitude control system  
[NASA-CASE-GSC-12970-1] c 08 N86-20396

**THREE DIMENSIONAL MOTION**

Solid state controller three axes controller  
[NASA-CASE-MSC-12394-1] c 08 N74-10942

**THRESHOLD GATES**

Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N72-11171

Radiation hardening of MOS devices by boron --- for stabilizing gate threshold potential  
[NASA-CASE-GSC-11425-2] c 76 N75-25730

**THRESHOLD LOGIC**

SCR blocking pulse gate amplifier Patent  
[NASA-CASE-XLA-07497] c 09 N71-12514

**THROATS**

Method of making a rocket nozzle  
[NASA-CASE-XMF-06884-1] c 20 N79-21123

**THRUST AUGMENTATION**

Nozzle Patent  
[NASA-CASE-XLA-00154] c 28 N70-33374

Construction and method of arranging a plurality of ion engines to form a cluster Patent  
[NASA-CASE-XNP-02923] c 28 N71-23081

Reversed cowl flap inlet thrust augmentor --- with adjustable airfoil  
[NASA-CASE-ARC-10754-1] c 07 N75-24736

Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039

Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130

**THRUST BEARINGS**

Thrust bearing  
[NASA-CASE-LEW-11949-1] c 37 N76-29588

**THRUST CHAMBER PRESSURE**

Pitch attitude stabilization system utilizing engine pressure ratio feedback signals  
[NASA-CASE-LAR-12562-1] c 08 N81-26152

**THRUST CHAMBERS**

Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503

Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383

Rocket thrust chamber Patent  
[NASA-CASE-XLE-00145] c 28 N70-36806

Method of making a rocket motor casing Patent  
[NASA-CASE-XLE-00409] c 28 N71-15656

Rocket motor casing Patent  
[NASA-CASE-XLE-05689] c 28 N71-15659

Rocket engine injector Patent  
[NASA-CASE-XLE-03157] c 28 N71-24736

Injection head for delivering liquid fuel and oxidizers  
[NASA-CASE-NPO-10046] c 28 N72-17843

Fluidic proportional thruster system  
[NASA-CASE-ARC-01106-1] c 28 N72-22769

Ion thruster  
[NASA-CASE-LEW-10770-1] c 28 N72-22770

Thermal flux transfer system  
[NASA-CASE-NPO-12070-1] c 28 N73-32606

Heat exchanger --- rocket combustion chambers and cooling systems  
[NASA-CASE-LEW-12252-1] c 34 N79-13288

Heat exchanger and method of making --- bonding rocket chambers with a porous metal matrix  
[NASA-CASE-LEW-12441-1] c 34 N79-13289

**THRUST CONTROL**

Electromechanical actuator  
[NASA-CASE-XNP-05975] c 15 N69-23165

Apparatus and method for control of a solid fueled rocket vehicle Patent  
[NASA-CASE-XNP-00217] c 28 N70-38181

Thrust and direction control apparatus Patent  
[NASA-CASE-XLE-03583] c 31 N71-17629

Continuous detonation reaction engine Patent  
[NASA-CASE-XMF-06926] c 28 N71-22983

High efficiency ionizer assembly Patent  
[NASA-CASE-XNP-01954] c 28 N71-28850

Heated porous plug microthruster  
[NASA-CASE-GSC-10640-1] c 28 N72-18766

Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c 09 N78-31129

Fluid thrust control system --- for liquid propellant rocket engines  
[NASA-CASE-XMF-05964-1] c 20 N79-21124

**THRUST LOADS**

Thrust measurement  
[NASA-CASE-XMS-05731] c 35 N75-29382

**THRUST MEASUREMENT**

Thrust dynamometer Patent  
[NASA-CASE-XLE-00702] c 14 N70-40203

Thrust dynamometer Patent  
[NASA-CASE-XLE-05260] c 14 N71-20429

Precision thrust gage Patent  
[NASA-CASE-XGS-02319] c 14 N71-22965

Micro-pound extended range thrust stand Patent  
[NASA-CASE-GSC-10710-1] c 28 N71-27094

**THRUST REVERSAL**

Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293

**THRUST VECTOR CONTROL**

Thrust vector control apparatus Patent  
[NASA-CASE-XLE-00208] c 28 N70-34284

Velocity package Patent  
[NASA-CASE-XLA-01339] c 31 N71-15692

Ion beam deflector Patent  
[NASA-CASE-LEW-10689-1] c 28 N71-26173

Tertiary flow injection thrust vectoring system Patent  
[NASA-CASE-MFS-20831] c 28 N71-29153

Flight control system  
[NASA-CASE-MSC-13397-1] c 21 N72-25595

Rocket thrust throttling system  
[NASA-CASE-LEW-10374-1] c 28 N73-13773

System for imposing directional stability on a rocket-propelled vehicle  
[NASA-CASE-MFS-21311-1] c 20 N76-21275

**THRUST-WEIGHT RATIO**

Missile launch release system Patent  
[NASA-CASE-XMF-03198] c 30 N70-40353

**THYRISTORS**

Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-23468-3] c 33 N81-22280

Pulsed thyristor trigger control circuit  
[NASA-CASE-MFS-25616-1] c 33 N84-16455

Phase detector for three-phase power factor controller  
[NASA-CASE-MFS-25854-1] c 33 N84-27975

Three-phase power factor controller with induced EMF sensing  
[NASA-CASE-MFS-25852-1] c 33 N84-33661

**TILES**

Strain arrestor plate for fused silica tile --- bonding of thermal insulation to metallic plates or structural parts  
[NASA-CASE-MSC-14182-1] c 27 N76-14264

High temperature emittance coatings and coating compositions --- repairing damaged space shuttle tiles in space  
[NASA-CASE-MSC-18851-1] c 27 N82-26480

Attachment system for silica tiles --- thermal protection for space shuttle orbiter  
[NASA-CASE-MSC-18741-1] c 27 N82-29456

Method for repair of thin glass coatings --- on space shuttle orbiter tiles  
[NASA-CASE-KSC-11097-1] c 27 N82-33520

Densification of porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18737-1] c 24 N83-13171

Method of repairing surface damage to porous refractory substrates --- space shuttle orbiter tiles  
[NASA-CASE-MSC-18736-1] c 24 N83-13172

Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482

Shell tile thermal protection system  
[NASA-CASE-LAR-12862-1] c 27 N84-27886

Mechanical fastener  
[NASA-CASE-LAR-12738-2] c 37 N85-30335

## TILT WING AIRCRAFT

- Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061
- TIME CONSTANT**  
Variable time constant smoothing circuit Patent  
[NASA-CASE-XGS-01983] c 10 N70-41964
- TIME DEPENDENCE**  
Instrument for determining coincidence and elapse time between independent sources of random sequential events  
[NASA-CASE-LAR-12531-1] c 35 N83-29651
- TIME DISCRIMINATION**  
Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent  
[NASA-CASE-XGS-00381] c 09 N70-34819
- TIME DIVISION MULTIPLEXING**  
Time division multiplex system  
[NASA-CASE-XGS-05918] c 07 N69-39974  
Time-division multiplexer Patent  
[NASA-CASE-XNP-00431] c 09 N70-36998  
Data processor having multiple sections activated at different times by selective power coupling to the sections Patent  
[NASA-CASE-XGS-04767] c 08 N71-12494  
Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506  
Time division radio relay synchronizing system using different sync code words for in sync and out of sync conditions Patent  
[NASA-CASE-GSC-10373-1] c 07 N71-19773  
Signal processing apparatus for multiplex transmission Patent  
[NASA-CASE-NPO-10388] c 07 N71-24622  
Programmable telemetry system Patent  
[NASA-CASE-GSC-10131-1] c 07 N71-24624  
High dynamic global positioning system receiver  
[NASA-CASE-NPO-16171-1CU] c 04 N86-27270
- TIME FUNCTIONS**  
Single or joint amplitude distribution analyzer Patent  
[NASA-CASE-XNP-01383] c 09 N71-10659
- TIME LAG**  
Closed loop ranging system Patent  
[NASA-CASE-XNP-01501] c 21 N70-41930  
Data compression system with a minimum time delay unit Patent  
[NASA-CASE-XNP-08832] c 08 N71-12506  
Signal phase estimator  
[NASA-CASE-NPO-11203] c 10 N72-20224  
Automatic transponder --- measurement of the internal delay time of a transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350  
Time delay and integration detectors using charge transfer devices  
[NASA-CASE-GSC-12324-1] c 33 N81-33403
- TIME MEASUREMENT**  
Time domain phase measuring apparatus  
[NASA-CASE-GSC-12228-1] c 33 N79-10338  
Synchronization tracking in pulse position modulation receiver  
[NASA-CASE-NPO-16256-1] c 32 N84-32620
- TIME MEASURING INSTRUMENTS**  
Measurement of time differences between luminous events Patent  
[NASA-CASE-XLA-01987] c 23 N71-23976  
Error correction method and apparatus for electronic timepieces  
[NASA-CASE-LAR-12654-1] c 33 N83-36357
- TIME OF FLIGHT SPECTROMETERS**  
Time of flight mass spectrometer with feedback means from the detector to the low source and a specific counter Patent  
[NASA-CASE-XNP-01056] c 14 N71-23041
- TIME SERIES ANALYSIS**  
Apparatus for statistical time-series analysis of electrical signals  
[NASA-CASE-MSC-12428-1] c 10 N73-25240  
Solid sorbent air sampler  
[NASA-CASE-MSC-20635-1] c 35 N86-26595
- TIME SHARING**  
Integrated time shared instrumentation display Patent  
[NASA-CASE-XLA-01952] c 08 N71-12507
- TIME SIGNALS**  
System for monitoring signal amplitude ranges  
[NASA-CASE-XMS-04061-1] c 09 N69-39885  
Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099  
Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326  
Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137  
System for generating timing and control signals  
[NASA-CASE-NPO-13125-1] c 33 N75-19519

- Precise RF timing signal distribution to remote stations --- fiber optics  
[NASA-CASE-NPO-14749-1] c 32 N81-14186
- TIMING DEVICES**  
Synchronous servo loop control system Patent  
[NASA-CASE-XNP-03744] c 10 N71-20448  
Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099  
Resettable monostable pulse generator Patent  
[NASA-CASE-GSC-11139] c 09 N71-27016  
Data transfer system Patent  
[NASA-CASE-NPO-12107] c 08 N71-27255  
High speed photo-optical time recording  
[NASA-CASE-KSC-10294] c 14 N72-18411
- TIPS**  
Thin wire pointing method  
[NASA-CASE-NPO-15789-1] c 31 N83-19947
- TIRES**  
Excessive temperature warning system Patent  
[NASA-CASE-XLA-01926] c 14 N71-15620  
Resilient wheel Patent  
[NASA-CASE-MFS-13929] c 15 N71-27091
- TISSUES (BIOLOGY)**  
Servo-controlled intravital microscope system  
[NASA-CASE-NPO-13214-1] c 35 N75-25123  
Method and system for in vivo measurement of bone tissue using a two level energy source  
[NASA-CASE-MSC-14276-1] c 52 N77-14737  
System for and method of freezing biological tissue  
[NASA-CASE-GSC-12173-1] c 51 N79-10694  
Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751  
Apparatus and method of inserting a microelectrode in body tissue or the like using vibration means  
[NASA-CASE-NPO-13910-1] c 52 N79-27836  
Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703  
Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045  
Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- TITANATES**  
Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MFS-13532] c 18 N72-17532
- TITANIUM**  
Method of joining aluminum to stainless steel Patent  
[NASA-CASE-MFS-07369] c 15 N71-20443  
Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397  
Method of mitigating titanium impurities effects in p-type silicon material for solar cells  
[NASA-CASE-NPO-14635-1] c 44 N80-24741  
Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944  
Diffusion oxygen barrier coating A02/MF A01  
[NASA-CASE-LAR-13474-1-SB] c 26 N86-24814
- TITANIUM ALLOYS**  
Method of inhibiting stress corrosion cracks in titanium alloys Patent  
[NASA-CASE-NPO-10271] c 17 N71-16393  
Nondestructive spot test method for titanium and titanium alloys  
[NASA-CASE-LAR-10539-1] c 17 N73-12547  
Method and apparatus for coating substrates using a laser  
[NASA-CASE-LEW-13526-1] c 36 N84-22944
- TITANIUM NITRIDES**  
Improved refractory coatings --- sputtered coatings on substrates that form stable nitrides  
[NASA-CASE-LEW-23169-2] c 26 N81-16209
- TITANIUM OXIDES**  
Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c 27 N77-30237
- TOLERANCES (MECHANICS)**  
Universal restrainer and joint Patent  
[NASA-CASE-XNP-02278] c 15 N71-28951
- TOLUENE**  
Supercritical multicomponent solvent coal extraction  
[NASA-CASE-NPO-15767-1] c 23 N84-16255
- TOMOGRAPHY**  
System for plotting subsoil structure and method therefor  
[NASA-CASE-NPO-14191-1] c 31 N80-32584  
Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281
- TOOLS**  
Tool attachment for spreading loose elements away from work Patent  
[NASA-CASE-XMF-02107] c 15 N71-10809  
Adjustable attitude guide device Patent  
[NASA-CASE-XLA-07911] c 15 N71-15571

- Tube dimpling tool Patent  
[NASA-CASE-XMS-06876] c 15 N71-21536
- Stud-bonding gun  
[NASA-CASE-MFS-20299] c 15 N72-11392  
Insert facing tool --- manually operated cutting tool for forming studs in honeycomb material  
[NASA-CASE-MFS-21485-1] c 37 N74-25968
- Stator rotor tools  
[NASA-CASE-MSC-16000-1] c 37 N78-24544  
Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839  
Open ended tubing cutters  
[NASA-CASE-MSC-18538-1] c 37 N82-26672  
Apparatus for accurately preloading auger attachment means for frangible protective material  
[NASA-CASE-MSC-18791-1] c 37 N83-36482  
Tubing and cable cutting tool  
[NASA-CASE-LAR-12786-1] c 37 N84-28085  
Connection system --- insuring against loss of a tool component without using multiple tethers  
[NASA-CASE-MSC-20319-1] c 37 N85-21649
- TOOTH DISEASES**  
Process for the preparation of brushite crystals  
[NASA-CASE-ERC-10338] c 04 N72-33072
- TOPOGRAPHY**  
Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c 43 N81-17499
- TORCHES**  
Apparatus for welding torch angle and seam tracking control Patent  
[NASA-CASE-XMF-03287] c 15 N71-15607  
Electric welding torch Patent  
[NASA-CASE-XMF-02330] c 15 N71-23798  
Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421  
Welding torch arc light reflector  
[NASA-CASE-MSC-29134-1] c 74 N86-20130
- TOROIDAL SHELLS**  
Toroidal cell and battery --- storage battery for high amp-hour load applications  
[NASA-CASE-LEW-12918-1] c 44 N81-24521
- TOROIDS**  
Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123  
Shaft transducer having dc output proportional to angular velocity  
[NASA-CASE-NPO-15706-1] c 35 N84-28017
- TORQUE**  
Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c 15 N71-21744  
Isolation coupling arrangement for a torque measuring system  
[NASA-CASE-XLA-04897] c 15 N72-22482  
High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c 37 N79-14383  
Acoustic driving of rotor  
[NASA-CASE-NPO-14005-1] c 71 N79-20827  
Magnetic field control --- electromechanical torquing device  
[NASA-CASE-MFS-23828-1] c 33 N82-26569  
Missile rolling tail brake torque system --- simulating bearing friction on canard controlled missiles  
[NASA-CASE-LAR-12751-1] c 15 N84-16231  
Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084  
Helicopter anti-torque system using strakes  
[NASA-CASE-LAR-13233-1] c 05 N84-33400  
Dual towline spin-recovery device  
[NASA-CASE-LAR-13076-1] c 08 N85-35200  
Fluidic momentum controller  
[NASA-CASE-MSC-20906-1] c 18 N86-19344
- TORQUE MOTORS**  
Low speed phase-locked speed control system --- for brushless dc motor  
[NASA-CASE-GSC-11127-1] c 09 N75-24758  
Magnetic bearing and motor  
[NASA-CASE-GSC-12726-1] c 37 N83-34323
- TORQUEMETERS**  
Optical torquemeter Patent  
[NASA-CASE-XLE-00503] c 14 N70-34818  
Balance torquemeter Patent  
[NASA-CASE-XGS-01013] c 14 N71-23725  
Pressure suit joint analyzer  
[NASA-CASE-ARC-11314-1] c 54 N82-26987
- TORSION**  
Radial and torsionally controlled magnetic bearing  
[NASA-CASE-GSC-12957-1] c 37 N86-20804
- TORSO**  
Restraint torso for a pressurized suit  
[NASA-CASE-MSC-12397-1] c 05 N72-25119  
Spacesuit torso closure  
[NASA-CASE-ARC-11100-1] c 54 N78-31736

- Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N85-21987
- Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618
- TOUCH**
- Mechanically actuated triggered hand  
[NASA-CASE-MFS-20413] c 15 N72-21463
- Method for measuring cutaneous sensory perception  
[NASA-CASE-MSC-13609-1] c 05 N72-25122
- Tactile sensing means for prosthetic limbs  
[NASA-CASE-MFS-16570-1] c 05 N73-32013
- TOUGHNESS**
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-1] c 24 N86-19380
- High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590
- Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451
- TOWERS**
- Aerial capsule emergency separation device Patent  
[NASA-CASE-XLA-00115] c 03 N70-33343
- TOXICITY**
- Glass compositions with a high modulus of elasticity --- nontoxic glass fibers  
[NASA-CASE-HQN-10274-1] c 27 N82-29451
- TOXICITY AND SAFETY HAZARD**
- Apparatus for remote handling of materials --- mixing or analyzing dangerous chemicals  
[NASA-CASE-LAR-10634-1] c 37 N74-18123
- TOXICOLOGY**
- Exposure system for animals Patent  
[NASA-CASE-XAC-05333] c 11 N71-22875
- TRACE CONTAMINANTS**
- Microbalance including crystal oscillators for measuring contaminants in a gas system Patent  
[NASA-CASE-NPO-10144] c 14 N71-17701
- Method for removing oxygen impurities from cesium Patent  
[NASA-CASE-XNP-04262-2] c 17 N71-26773
- Electric discharge for treatment of trace contaminants  
[NASA-CASE-AHL-10915-1] c 33 N79-15245
- Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1] c 31 N85-20154
- Nebulization reflux concentrator  
[NASA-CASE-LAR-13254-1CU] c 35 N86-29174
- TRACE ELEMENTS**
- Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c 14 N71-28863
- Automated system for identifying traces of organic chemical compounds in aqueous solutions  
[NASA-CASE-NPO-13063-1] c 25 N76-18245
- Nulling device for detection of trace gases by NDIR absorption  
[NASA-CASE-ARC-10760-1] c 25 N76-22323
- Thermoluminescent aerosol analysis  
[NASA-CASE-LAR-12046-1] c 25 N78-15210
- TRACKED VEHICLES**
- Improvements in tank tread assemblies  
[NASA-CASE-NPO-16321-1] c 37 N85-29291
- TRACKING (POSITION)**
- Plurality of photosensitive cells on a pyramidal base for planetary trackers  
[NASA-CASE-XNP-04180] c 07 N69-39736
- Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699
- Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125
- Mount for continuously orienting a collector dish in a system adapted to perform both diurnal and seasonal solar tracking  
[NASA-CASE-MFS-23267-1] c 35 N77-20401
- System and method for tracking a signal source --- employing feedback control  
[NASA-CASE-HQN-10880-1] c 17 N78-17140
- Sun tracking solar energy collector  
[NASA-CASE-NPO-13921-1] c 44 N79-14526
- TRACKING FILTERS**
- Automatic acquisition system for phase-lock loop  
[NASA-CASE-XGS-04994] c 09 N69-21543
- Apparatus and method for stabilized phase detection for binary signal tracking loops  
[NASA-CASE-MSC-16461-1] c 33 N79-11313
- PN lock indicator for dithered PN code tracking loop  
[NASA-CASE-NPO-14435-1] c 33 N81-33405
- Apparatus and method for tracking the fundamental frequency of an analog input signal  
[NASA-CASE-ARC-11367-1] c 33 N83-21238
- TRACKING RADAR**
- Monopulse system with an electronic scanner  
[NASA-CASE-XGS-05582] c 07 N69-27460
- Phase-locked loop with sideband rejecting properties Patent  
[NASA-CASE-XNP-02723] c 07 N70-41680
- Radar antenna system for acquisition and tracking Patent  
[NASA-CASE-XMS-09610] c 07 N71-24625
- Acquisition and tracking system for optical radar  
[NASA-CASE-MFS-20125] c 16 N72-13437
- Synthetic aperture radar target simulator  
[NASA-CASE-NPO-15024-1] c 32 N84-27951
- TRACKING STATIONS**
- Optical monitor panel Patent  
[NASA-CASE-XKS-03509] c 14 N71-23175
- Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854
- TRAFFIC CONTROL**
- Traffic survey system --- using optical scanners  
[NASA-CASE-MFS-22631-1] c 66 N76-19888
- TRAILERS**
- Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288
- TRAILING EDGES**
- Pumped vortex  
[NASA-CASE-LAR-12625-1] c 02 N83-19715
- TRAILING-EDGE FLAPS**
- Double hinged flap Patent  
[NASA-CASE-XLA-01290] c 02 N70-42016
- Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097
- TRAINING DEVICES**
- Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193
- TRAINING SIMULATORS**
- Mechanical simulator of low gravity conditions Patent  
[NASA-CASE-MFS-10555] c 11 N71-19494
- Subgravity simulator Patent  
[NASA-CASE-XMS-04798] c 11 N71-21474
- Kinesthetic control simulator --- for pilot training  
[NASA-CASE-LAR-10276-1] c 09 N75-15662
- TRAJECTORY ANALYSIS**
- Means for visually indicating flight paths of vehicles between the Earth, Venus, and Mercury Patent  
[NASA-CASE-XNP-00706] c 14 N70-35394
- Method of planetary atmospheric investigation using a split-trajectory dual flyby mode Patent  
[NASA-CASE-XAC-08494] c 30 N71-15990
- TRAJECTORY CONTROL**
- Trajectory-correction propulsion system Patent  
[NASA-CASE-XNP-01104] c 28 N70-39931
- Technique for control of free-flight rocket vehicles Patent  
[NASA-CASE-XLA-00937] c 31 N71-17051
- Apparatus for automatically stabilizing the attitude of a nonrigid vehicle  
[NASA-CASE-ARC-10134] c 30 N72-17873
- TRANSducers**
- Pressure variable capacitor  
[NASA-CASE-XNP-09752] c 14 N69-21541
- Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c 09 N71-12516
- Vibrating structure displacement measuring instrument Patent  
[NASA-CASE-XLA-03135] c 32 N71-16428
- Contour surveying system Patent  
[NASA-CASE-XLA-08646] c 14 N71-17586
- Rotary bead dropper and selector for testing micrometeorite detectors Patent  
[NASA-CASE-XGS-03304] c 09 N71-22988
- Self-calibrating displacement transducer Patent  
[NASA-CASE-XLA-00781] c 09 N71-22999
- Extensometer frame  
[NASA-CASE-XLA-10322] c 15 N72-17452
- Split range transducer  
[NASA-CASE-XLA-11189] c 10 N72-20222
- Pulsed excitation voltage circuit for transducers  
[NASA-CASE-FRC-10036] c 09 N72-22200
- Magnifying scratch gage force transducer  
[NASA-CASE-LAR-10496-1] c 14 N72-22437
- Intruder detection system  
[NASA-CASE-ARC-10097-2] c 07 N73-25160
- Acoustical transducer calibrating system and apparatus  
[NASA-CASE-FRC-10060-1] c 14 N73-27379
- Demodulator for carrier transducers  
[NASA-CASE-NUC-10107-1] c 33 N74-17930
- LC-oscillator with automatic stabilized amplitude via bias current control --- power supply circuit for transducers  
[NASA-CASE-MFS-21698-1] c 33 N74-26732
- Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566
- Diode-quad bridge circuit means  
[NASA-CASE-ARC-10364-3] c 33 N75-19520
- Subminiature insertable force transducer --- including a strain gage to measure forces in muscles  
[NASA-CASE-NPO-13423-1] c 33 N75-31329
- Self-supporting strain transducer  
[NASA-CASE-LAR-11263-1] c 35 N75-33369
- Miniature muscle displacement transducer  
[NASA-CASE-NPO-13519-1] c 33 N76-19338
- Method and apparatus for nondestructive testing of pressure vessels  
[NASA-CASE-NPO-12142-1] c 38 N76-28563
- Myocardium wall thickness transducer and measuring method  
[NASA-CASE-NPO-13644-1] c 52 N76-29895
- Solar cell angular position transducer  
[NASA-CASE-LAR-11999-1] c 44 N80-18552
- Simultaneous muscle force and displacement transducer  
[NASA-CASE-NPO-14212-1] c 52 N80-27072
- Multifunctional transducer  
[NASA-CASE-NPO-14329-1] c 52 N81-20703
- Photomechanical transducer  
[NASA-CASE-NPO-14363-1] c 39 N81-25400
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470
- Thin film strain transducer  
[NASA-CASE-WLP-10055-1] c 35 N84-28015
- Strain gage calibration  
[NASA-CASE-LAR-12743-1] c 35 N84-28019
- Thin film strain transducer --- suitable for in-flight measurement of scientific balloon strain  
[NASA-CASE-WLP-10055-2] c 35 N85-21598
- Gravity enhanced acoustic levitation method and apparatus  
[NASA-CASE-NPO-16147-1-CU] c 71 N85-29693
- Single mode levitation and translation  
[NASA-CASE-NPO-16675-1-CU] c 71 N86-20087
- Adjustable mount for electro-optic transducers in an evacuated cryogenic system  
[NASA-CASE-LAR-13100-1] c 37 N86-24993
- TRANSFER FUNCTIONS**
- Method and apparatus for transfer function simulator for testing complex systems  
[NASA-CASE-NPO-15896-1] c 33 N85-34333
- TRANSFORMERS**
- Signal multiplexer  
[NASA-CASE-XGS-01110] c 07 N69-24334
- Insertion loss measuring apparatus having transformer means connected across a pair of bolometers Patent  
[NASA-CASE-XNP-01193] c 10 N71-16057
- Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800
- Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893
- Electronically resettable fuse Patent  
[NASA-CASE-XGS-11177] c 09 N71-27001
- Voltage regulator Patent  
[NASA-CASE-ERC-10113] c 09 N71-27053
- Radial heat flux transformer  
[NASA-CASE-NPO-10828] c 33 N72-17948
- Saturation current protection apparatus for saturable core transformers  
[NASA-CASE-ERC-10075-2] c 09 N72-22196
- Failsafe multiple transformer circuit configuration  
[NASA-CASE-NPO-11078] c 09 N72-25262
- Banded transformer cores  
[NASA-CASE-NPO-11966-1] c 33 N74-17928
- Solid-state current transformer  
[NASA-CASE-MFS-22560-1] c 33 N77-14335
- Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c 33 N78-17295
- Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257
- System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c 33 N79-28415
- Three phase power factor controller  
[NASA-CASE-MFS-25535-1] c 33 N81-12330
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220
- Low current linearization of magnetic amplifier for dc transducer  
[NASA-CASE-NPO-14617-1] c 33 N81-24338
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404
- Non-contacting power transfer device  
[NASA-CASE-GSC-12595-1] c 33 N82-24422
- High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146

## TRANSIENT HEATING

- Thermocouple installation  
[NASA-CASE-NPO-13540-1] c 35 N77-14409
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373
- TRANSIENT LOADS**
- Deployable solar cell array  
[NASA-CASE-NPO-10883] c 31 N72-22874
- TRANSISTOR AMPLIFIERS**
- Apparatus for overcurrent protection of a push-pull amplifier Patent  
[NASA-CASE-MSC-12033-1] c 09 N71-13531
- TRANSISTOR CIRCUITS**
- Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317
- Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463
- Pulse counting circuit which simultaneously indicates the occurrence of the nth pulse Patent  
[NASA-CASE-XMF-00906] c 09 N70-41655
- Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c 09 N70-41675
- Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-XNP-02654] c 10 N70-42032
- High voltage transistor circuit Patent  
[NASA-CASE-XNP-06937] c 09 N71-19516
- Complementary regenerative switch Patent  
[NASA-CASE-XGS-02751] c 09 N71-23015
- Transistor drive regulator Patent  
[NASA-CASE-LEW-10233] c 10 N71-27126
- Multiple slope sweep generator Patent  
[NASA-CASE-XMS-03542] c 09 N71-28926
- Broadband video process with very high input impedance  
[NASA-CASE-NPO-10199] c 09 N72-17156
- Ultra-stable oscillator with complementary transistors  
[NASA-CASE-GSC-11513-1] c 33 N74-20862
- Inrush current limiter  
[NASA-CASE-GSC-11789-1] c 33 N77-14333
- Temperature compensated current source  
[NASA-CASE-MSC-11235] c 33 N78-17294
- Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404
- Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494
- TRANSISTORS**
- Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543
- Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799
- Cascaded complementary pair broadband transistor amplifiers Patent  
[NASA-CASE-NPO-10003] c 10 N71-26415
- Fast response low power drain logic circuits  
[NASA-CASE-GSC-10878-1] c 10 N72-22236
- Coaxial inverted geometry transistor having buried emitter  
[NASA-CASE-ARC-10330-1] c 09 N73-32112
- Four phase logic systems --- including integrated microcircuits  
[NASA-CASE-MSC-14240-1] c 33 N75-14957
- Complementary DMOS-VMOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321
- Circuit for automatic load sharing in parallel converter modules  
[NASA-CASE-NPO-14056-1] c 33 N79-24257
- Base drive for paralleled inverter systems  
[NASA-CASE-NPO-14163-1] c 33 N81-14220
- Four quadrant control circuit for a brushless three phase dc motor  
[NASA-CASE-MFS-28080-1] c 33 N86-20682
- TRANSITION FLOW**
- Ablation article and method  
[NASA-CASE-LAR-10439-1] c 33 N73-27796
- TRANSITION TEMPERATURE**
- Process for preparing thermoplastic aromatic polyimides  
[NASA-CASE-LAR-11828-1] c 27 N78-32261
- Copolyimides with a combination of flexibilizing groups  
[NASA-CASE-LAR-13354-1] c 27 N86-20566
- Method of producing high T superconducting NbN films  
[NASA-CASE-NPO-16681-1-CU] c 76 N86-21401
- TRANSLATIONAL MOTION**
- Centrifuge mounted motion simulator Patent  
[NASA-CASE-XAC-00399] c 11 N70-34815

- Translating horizontal tail Patent  
[NASA-CASE-XLA-08801-1] c 02 N71-11043
- Semi-linear ball bearing Patent  
[NASA-CASE-XLA-02809] c 15 N71-22982
- Positioning mechanism  
[NASA-CASE-NPO-10679] c 15 N72-21462
- TRANSLATORS**
- Serial data correlator/code translator  
[NASA-CASE-KSC-11025-1] c 32 N83-13323
- TRANSLUCENCE**
- Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- TRANSMISSION CIRCUITS**
- Beam forming network  
[NASA-CASE-NPO-15743-1] c 32 N85-29118
- TRANSMISSION EFFICIENCY**
- Microwave power transmission system wherein level of transmitted power is controlled by reflections from receiver  
[NASA-CASE-MFS-21470-1] c 44 N74-19870
- Linear phase demodulator including a phase locked loop with auxiliary feedback loop  
[NASA-CASE-GSC-12018-1] c 33 N77-14334
- TRANSMISSION LINES**
- Validation device for spacecraft checkout equipment Patent  
[NASA-CASE-XKS-10543] c 07 N71-26292
- Collapsible antenna boom and transmission line Patent  
[NASA-CASE-MFS-20068] c 07 N71-27191
- Phase modulator Patent  
[NASA-CASE-MSC-13201-1] c 07 N71-28429
- Shielded flat cable  
[NASA-CASE-MFS-13687-2] c 09 N72-22198
- Phase control circuits using frequency multiplications for phased array antennas  
[NASA-CASE-ERC-10285] c 10 N73-16206
- Phase protection system for ac power lines  
[NASA-CASE-MSC-17832-1] c 33 N74-14956
- System for stabilizing cable phase delay utilizing a coaxial cable under pressure  
[NASA-CASE-NPO-13138-1] c 33 N74-17927
- Telephone multiline signaling using common signal pair  
[NASA-CASE-KSC-11023-1] c 32 N79-23310
- System for automatically switching transformer coupled lines  
[NASA-CASE-MSC-16697-1] c 33 N79-28415
- TRANSMISSIONS (MACHINE ELEMENTS)**
- Compensating linkage for main rotor control  
[NASA-CASE-LAR-11797-1] c 05 N81-19087
- Directional gear ratio transmissions  
[NASA-CASE-LAR-12644-1] c 37 N84-28084
- TRANSMISSIVITY**
- Process of making medical clip  
[NASA-CASE-LAR-12650-2] c 52 N84-28389
- TRANSMITTANCE**
- Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- TRANSMITTER RECEIVERS**
- Integrated thermoelectric generator/space antenna combination  
[NASA-CASE-XER-09521] c 09 N72-12136
- Location identification system  
[NASA-CASE-ERC-10324] c 07 N72-25173
- Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c 32 N74-12912
- Digital communication system  
[NASA-CASE-MSC-13912-1] c 32 N74-30524
- TRANSMITTERS**
- Temperature telemetric transmitter Patent  
[NASA-CASE-NPO-10649] c 07 N71-24840
- Two carrier communication system with single transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118
- Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625
- Digital transmitter for data bus communications system  
[NASA-CASE-MSC-14558-1] c 32 N75-21486
- Apparatus for endoscopic examination --- analysis of the propulsion system configuration and transmitter  
[NASA-CASE-NPO-14092-1] c 52 N80-16725
- A single frequency multitransmitter telemetry system  
[NASA-CASE-LAR-13006-1] c 17 N83-20995
- TRANSONIC SPEED**
- Leading edge curvature based on convective heating Patent  
[NASA-CASE-XLA-01486] c 01 N71-23497
- TRANSONIC WIND TUNNELS**
- Wind tunnel test section  
[NASA-CASE-MFS-20509] c 11 N72-17183
- TRANSPARECE**
- Helmet assembly and latch means therefor Patent  
[NASA-CASE-XMS-04935] c 05 N71-11190

- Method and apparatus for producing an image from a transparent object  
[NASA-CASE-GSC-11989-1] c 74 N77-28932
- Method of fabricating a photovoltaic module of a substantially transparent construction  
[NASA-CASE-NPO-14303-1] c 44 N80-18550
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N85-20128
- Process for preparing highly optically transparent-colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N85-21360
- Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750
- Process for preparing essentially colorless polyimide film containing phenoxy-linked diamines  
[NASA-CASE-LAR-13353-1] c 27 N86-29039
- Process for preparing highly optically transparent/colorless aromatic polyimide film  
[NASA-CASE-LAR-13351-1] c 27 N86-31727
- TRANSPARATION**
- Rocket chamber and method of making  
[NASA-CASE-LEW-11118-2] c 20 N76-14191
- TRANSPONDERS**
- Dynamic Doppler simulator Patent  
[NASA-CASE-XMS-05454-1] c 07 N71-12391
- Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118
- Code regenerative clean-up loop transponder for a mu-type ranging system  
[NASA-CASE-NPO-11707] c 07 N73-25161
- Automatic vehicle location system  
[NASA-CASE-NPO-11850-1] c 32 N74-12912
- Simultaneous acquisition of tracking data from two stations  
[NASA-CASE-NPO-13292-1] c 32 N75-15854
- Automatic transponder --- measurement of the internal delay time of a transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350
- Video processor for air traffic control beacon system  
[NASA-CASE-KSC-11155-1] c 04 N86-19304
- TRANSPORTATION**
- Supporting and protecting device Patent  
[NASA-CASE-XMF-00580] c 11 N70-35383
- Shuttle car loading system  
[NASA-CASE-NPO-15949-1] c 85 N85-34722
- TRANSVERSE ACCELERATION**
- Rim inertial measuring system  
[NASA-CASE-LAR-12052-1] c 18 N81-29152
- TRAPS**
- Deep trap, laser activated image converting system  
[NASA-CASE-NPO-13131-1] c 36 N75-19652
- TRAVELING WAVE AMPLIFIERS**
- Serrodyne frequency converter re-entrant amplifier system Patent  
[NASA-CASE-XGS-01022] c 07 N71-16088
- Traveling wave solid state amplifier utilizing a semiconductor with negative differential mobility  
[NASA-CASE-HQN-10069] c 33 N75-27251
- Resonant isolator for maser amplifier  
[NASA-CASE-NPO-15201-1] c 36 N83-35350
- Ladder supported ring bar circuit  
[NASA-CASE-LEW-13570-1] c 33 N84-16452
- TRAVELING WAVE MASERS**
- Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550
- High-gain, broadband traveling wave maser Patent  
[NASA-CASE-NPO-10548] c 16 N71-24831
- Independent gain and bandwidth control of a traveling wave maser  
[NASA-CASE-NPO-13801-1] c 36 N78-18410
- TRAVELING WAVE TUBES**
- Segmented superconducting magnet for a broadband traveling wave maser Patent  
[NASA-CASE-XGS-10518] c 16 N71-28554
- Traveling wave tube circuit  
[NASA-CASE-LEW-12013-1] c 33 N79-10339
- Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N80-19425
- Multistage depressed collector for dual mode operation --- for microwave transmitting tubes  
[NASA-CASE-LEW-13282-1] c 33 N82-24415
- Linearized traveling wave amplifier with hard limiter characteristics  
[NASA-CASE-LEW-13981-2] c 33 N86-21742
- TRAVELING WAVES**
- Maser for frequencies in the 7-20 GHz range  
[NASA-CASE-NPO-11437] c 16 N72-28521
- TREADMILLS**
- Tread drum for animals --- having an electrical shock station  
[NASA-CASE-ARC-10917-1] c 51 N78-27733
- TREADS**
- Improvements in tank tread assemblies  
[NASA-CASE-NPO-16321-1] c 37 N85-29291

## TRIGGER CIRCUITS

- Ring counter  
[NASA-CASE-XGS-03095] c 09 N69-27463
- Electric arc driven wind tunnel Patent  
[NASA-CASE-XMF-00411] c 11 N70-36913
- Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244
- Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
[NASA-CASE-ARC-10137-1] c 09 N71-28468
- SCR lamp driver  
[NASA-CASE-GSC-10221-1] c 09 N72-23171
- Rapidly pulsed, high intensity, incoherent light source  
[NASA-CASE-XLE-2529-3] c 33 N74-20859
- Pulsed thyristor trigger control circuit  
[NASA-CASE-MFS-25616-1] c 33 N84-16455

## TRIGONOMETRY

- Trigonometric vehicle guidance assembly which aligns the three perpendicular axes of two three-axes systems Patent  
[NASA-CASE-XMF-00684] c 21 N71-21688

## TRIMERS

- Trifunctional alcohol  
[NASA-CASE-NPO-10714] c 06 N69-31244
- Trimerization of aromatic nitriles  
[NASA-CASE-LEW-12053-1] c 27 N78-15276
- Catalytic trimerization of aromatic nitriles and triaryl-s-triazine ring cross-linked high temperature resistant polymers and copolymers made thereby  
[NASA-CASE-LEW-12053-2] c 27 N79-28307

## TRIODES

- Triode thermionic energy converter  
[NASA-CASE-XLE-01015] c 03 N69-39898
- Textured carbon surfaces on copper  
[NASA-CASE-LEW-14130-1] c 31 N85-20156
- Textured carbon surfaces on copper by sputtering  
[NASA-CASE-LEW-14130-1] c 31 N86-32587

## TRITIUM

- Method for determining the state of charge of batteries by the use of tracers Patent  
[NASA-CASE-XNP-01464] c 03 N71-10728

## TROPICPAUSE

- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040

## TRUCKS

- Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477
- Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288

## TRUSSES

- Low mass truss structure  
[NASA-CASE-LAR-10546-1] c 11 N72-25287
- Lightweight structural columns --- space erectable trusses  
[NASA-CASE-LAR-12095-1] c 31 N81-25258
- Structural members, method and apparatus  
[NASA-CASE-MS-C-16217-1] c 31 N81-27323
- Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479
- Shuttle-launch triangular space station  
[NASA-CASE-MS-C-20676-1] c 18 N86-24729
- Deployable geodesic truss structure A01  
[NASA-CASE-LAR-13113-1] c 31 N86-24867
- Synchronously deployable truss structure  
[NASA-CASE-LAR-13117-1] c 37 N86-25789
- Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N86-31630
- Deployable M-braced truss structure  
[NASA-CASE-LAR-13081-1] c 37 N86-32737

## TUBE GRIDS

- Method for fabricating solar cells having integrated collector grids  
[NASA-CASE-LEW-12819-2] c 44 N79-18444

## TUBE HEAT EXCHANGERS

- Electrothermal rockets having improved heat exchangers Patent  
[NASA-CASE-XLE-01783] c 28 N70-34175
- Procedure and apparatus for determination of water in nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094
- Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736
- Solar energy receiver for a Stirling engine  
[NASA-CASE-NPO-14619-1] c 44 N81-17518

## TUBES

- Method of making tubes Patent  
[NASA-CASE-XGS-04175] c 15 N71-18579
- Tube sealing device Patent  
[NASA-CASE-NPO-10431] c 15 N71-29132

## TUMBLING MOTION

- Tumbler system to provide random motion  
[NASA-CASE-XGS-02437] c 15 N69-21472

## TUMORS

- Liquid cooled brassiere and method of diagnosing malignant tumors therewith  
[NASA-CASE-ARC-11007-1] c 52 N77-14736

## TUNABLE LASERS

- Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943
- Portable remote laser sensor for methane leak detection  
[NASA-CASE-NPO-15790-1] c 36 N85-21631
- Digital control of diode laser for atmospheric spectroscopy  
[NASA-CASE-NPO-16000-1] c 36 N85-29264
- Method and means for generation of tunable laser sidebands in the far-infrared region  
[NASA-CASE-NPO-16497-1-CU] c 36 N86-20779

## TUNGSTEN

- Bonding thermoelectric elements to nonmagnetic refractory metal electrodes  
[NASA-CASE-XGS-04554] c 15 N69-39786
- Method of producing porous tungsten ionizers for ion rocket engines Patent  
[NASA-CASE-XLE-00455] c 28 N70-38197
- Small plasma probe Patent  
[NASA-CASE-XLE-02578] c 25 N71-20747
- Fabrication of controlled-porosity metals Patent  
[NASA-CASE-XNP-04339] c 17 N71-29137
- Tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c 09 N72-25259
- Nuclear thermionic converter --- tungsten-thorium oxide rods  
[NASA-CASE-NPO-13121-1] c 73 N77-18891

## TUNGSTEN ALLOYS

- Evaporant holder  
[NASA-CASE-XLA-03105] c 15 N69-27483
- Cobalt-base alloy  
[NASA-CASE-LEW-10436-1] c 17 N73-32415
- Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279

## TUNING

- Active tuned circuit  
[NASA-CASE-GSC-11340-1] c 10 N72-33230
- Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235
- Tuned analog network  
[NASA-CASE-GSC-12650-1] c 33 N84-14421
- Spectrophone stabilized laser with line center offset frequency control  
[NASA-CASE-NPO-15516-1] c 36 N84-22943
- Precision tunable resonant microwave cavity  
[NASA-CASE-LEW-13935-1] c 33 N85-20248
- Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947
- Programmable electronic synthesized capacitance  
[NASA-CASE-GSC-12961-1] c 33 N86-20679

## TUNNEL DIODES

- Low power drain semi-conductor circuit  
[NASA-CASE-XGS-04999] c 09 N69-24317

## TUNNELING (EXCAVATION)

- Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272

## TUNNELS

- Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540

## TURBINE BLADES

- Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226
- Modification and improvements to cooled blades Patent  
[NASA-CASE-XLE-00092] c 15 N70-33264
- High temperature nickel-base alloy Patent  
[NASA-CASE-XLE-00151] c 17 N70-33283
- External liquid-spray cooling of turbine blades Patent  
[NASA-CASE-XLE-00037] c 28 N70-33372
- Liquid spray cooling method Patent  
[NASA-CASE-XLE-00027] c 33 N71-29152
- Welding blades to rotors  
[NASA-CASE-LEW-10533-1] c 15 N73-28515
- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170
- Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c 07 N81-27096
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-2] c 37 N82-26674
- Method of protecting a surface with a silicon-slurry/aluminate coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441

- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453
- Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493

## TURBINE ENGINES

- High speed, self-acting shaft seal --- for use in turbine engines  
[NASA-CASE-LEW-11274-1] c 37 N75-21631
- Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c 07 N77-28118
- Composite seal for turbomachinery --- backings for turbine engine shrouds  
[NASA-CASE-LEW-12131-1] c 37 N79-18318
- Self stabilizing sonic inlet  
[NASA-CASE-LEW-11890-1] c 05 N79-24976
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658
- Pumped vortex  
[NASA-CASE-LAR-12625-1] c 02 N83-19715

## TURBINE PUMPS

- Pulsed energy power system Patent  
[NASA-CASE-MS-C-13112] c 03 N71-11057
- Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654
- Supersonic-combustion rocket  
[NASA-CASE-LEW-11058-1] c 20 N74-13502
- Supercharged topping rocket propellant feed system  
[NASA-CASE-XLE-02062-1] c 20 N80-14188

## TURBINE WHEELS

- Locking device for turbine rotor blades Patent  
[NASA-CASE-XNP-00816] c 28 N71-28928
- Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c 37 N74-11300
- Blade retainer assembly  
[NASA-CASE-LEW-12608-1] c 07 N77-27116

## TURBINES

- Rotating shaft seal Patent  
[NASA-CASE-NPO-02862-1] c 15 N71-26294
- Method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-2] c 37 N85-29282

## TURBOCOMPRESSORS

- Multistage multiple-reentry turbine Patent  
[NASA-CASE-XLE-00170] c 15 N70-32412
- Apparatus and method for reducing thermal stress in a turbine rotor  
[NASA-CASE-LEW-12232-1] c 07 N79-10057
- Combustor liner construction  
[NASA-CASE-LEW-14035-1] c 07 N84-24577
- Diesel engine catalytic combustor system --- aircraft engines  
[NASA-CASE-LEW-12995-1] c 37 N84-33808

## TURBOFAN ENGINES

- Supersonic fan blading --- noise reduction in turbofan engines  
[NASA-CASE-LEW-11402-1] c 07 N74-28226
- Noise suppressor --- for turbofan engine by incorporating annular acoustically porous elements in exhaust and inlet ducts  
[NASA-CASE-LAR-11141-1] c 07 N74-32418
- Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055
- Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039
- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116
- Thrust reverser for a long duct fan engine --- for turbofan engines  
[NASA-CASE-LEW-13199-1] c 07 N82-26293
- Noise suppressor for turbo fan jet engines  
[NASA-CASE-ARC-10812-1] c 07 N83-33884

## TURBOFANS

- Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c 07 N77-14025
- Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c 07 N77-17059

## TURBOGENERATORS

- Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018

## TURBOJET ENGINE CONTROL

- Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12594-2] c 07 N81-19116

## TURBOJET ENGINES

- Telescoping-spike supersonic inlet for aircraft engines Patent  
[NASA-CASE-XLE-00005] c 28 N70-39899
- Gas turbine combustion apparatus Patent  
[NASA-CASE-XLE-103477-1] c 28 N71-20330
- Reduction of nitric oxide emissions from a combustor  
[NASA-CASE-ARC-10814-2] c 07 N80-26298

## TURBOMACHINE BLADES

- Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c 07 N77-32148

## U

- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-2] c 37 N80-26658
- TURBOMACHINERY**
- Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c 28 N71-29154
- Composite seal for turbomachinery  
[NASA-CASE-LEW-12131-3] c 37 N82-19540
- Fully plasma-sprayed compliant backed ceramic turbine seal  
[NASA-CASE-LEW-13268-1] c 27 N82-29453
- Method of fabricating an abradable gas path seal  
[NASA-CASE-LEW-13269-2] c 37 N84-22957
- Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018
- Compliant hydrodynamic fluid journal bearing  
[NASA-CASE-LEW-13670-1] c 37 N86-19606
- Damping seal for turbomachinery  
[NASA-CASE-MFS-25842-2] c 37 N86-20788
- TURBOSHAPTS**
- Optical torque meter Patent  
[NASA-CASE-XLE-00503] c 14 N70-34818
- High speed, self-acting shaft seal --- for use in turbine engines  
[NASA-CASE-LEW-11274-1] c 37 N75-21631
- TURBULENCE METERS**
- Hot foil transducer skin friction sensor  
[NASA-CASE-LAR-12321-1] c 35 N82-24470
- TURBULENCE BOUNDARY LAYER**
- Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235
- TURBULENCE FLOW**
- Exhaust flow deflector --- for ducted gas flow  
[NASA-CASE-LAR-11570-1] c 34 N76-18364
- System for measuring Reynolds in a turbulently flowing fluid --- signal processing  
[NASA-CASE-ARC-10755-2] c 34 N76-27517
- System for measuring three fluctuating velocity components in a turbulently flowing fluid  
[NASA-CASE-ARC-10974-1] c 34 N77-27345
- Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c 02 N80-20224
- Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639
- Active control of boundary layer transition and turbulence  
[NASA-CASE-LAR-13532-1] c 34 N86-26575
- TURNSTILE ANTENNAS**
- Method and means for damping nutation in a satellite Patent  
[NASA-CASE-XMF-00442] c 31 N71-10747
- Broadband modified turnstile antenna Patent  
[NASA-CASE-MS-C-12209] c 09 N71-24842
- Turnstile slot antenna  
[NASA-CASE-GSC-11428-1] c 32 N74-20864
- Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c 33 N76-14372
- TURRET**
- Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent  
[NASA-CASE-NPO-10625] c 09 N71-26182
- TWISTING**
- Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279
- TWO BODY PROBLEM**
- Instrument for measuring potentials on two dimensional electric field plots Patent  
[NASA-CASE-XLA-08493] c 10 N71-19421
- TWO DIMENSIONAL BODIES**
- Two-dimensional radiant energy array computers and computing devices  
[NASA-CASE-GSC-11839-1] c 60 N77-14751
- TWO PHASE FLOW**
- Two-step rocket engine bipropellant valve Patent  
[NASA-CASE-XMS-04890-1] c 15 N70-22192
- Booster tank system Patent  
[NASA-CASE-MS-C-12390] c 27 N71-29155
- Two phase flow system with discrete impinging two-phase jets  
[NASA-CASE-NPO-11556] c 12 N72-25292
- Method and turbine for extracting kinetic energy from a stream of two-phase fluid  
[NASA-CASE-NPO-14130-1] c 34 N79-20335
- Method for driving two-phase turbines with enhanced efficiency  
[NASA-CASE-NPO-15037-2] c 37 N85-29282
- Pumped two-phase heat transfer loop  
[NASA-CASE-MS-C-20841-1] c 34 N86-20721
- TYPEWRITERS**
- Guide for a typewriter  
[NASA-CASE-MFS-15218-1] c 37 N77-19457

## U BENDS

- Technique of elbow bending small jacketed transfer lines Patent  
[NASA-CASE-XNP-10475] c 15 N71-24679
- Method for distillation of liquids  
[NASA-CASE-XNP-08124-2] c 06 N73-13129

## ULCERS

- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-2] c 52 N81-14613
- Indomethacin-antihistamine combination for gastric ulceration control  
[NASA-CASE-ARC-11118-1] c 52 N81-29764

## ULLAGE

- Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MS-C-12280] c 27 N71-16348

## ULTRAHIGH FREQUENCIES

- Turnstile and flared cone UHF antenna  
[NASA-CASE-LAR-10970-1] c 33 N76-14372
- Dual band combiner for horn antenna  
[NASA-CASE-NPO-14519-1] c 32 N80-23524

## ULTRAHIGH VACUUM

- Method of lubricating rolling element bearings Patent  
[NASA-CASE-XLE-09527] c 15 N71-17688
- Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390
- Ultrahigh vacuum gauge having two collector electrodes  
[NASA-CASE-LAR-02743] c 14 N73-32324
- In situ transfer standard for ultrahigh vacuum gauge calibration  
[NASA-CASE-LAR-10862-1] c 35 N74-15092
- Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability  
[NASA-CASE-LAR-13040-1] c 37 N85-29286

## ULTRAPURE METALS

- Production of ultrapure amorphous metals utilizing acoustic cooling  
[NASA-CASE-NPO-15658-1] c 26 N83-19890
- Apparatus for production of ultrapure amorphous metals utilizing acoustic cooling  
[NASA-CASE-NPO-15658-1] c 26 N86-32551

## ULTRASONIC AGITATION

- Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514

## ULTRASONIC CLEANING

- Acoustic tooth cleaner  
[NASA-CASE-LAR-12471-1] c 52 N82-29862

## ULTRASONIC FLAW DETECTION

- Length mode piezoelectric ultrasonic transducer for inspection of solid objects  
[NASA-CASE-MS-C-19672-1] c 38 N79-14398
- Two-dimensional scanner apparatus --- flaw detector in small flat plates  
[NASA-CASE-MFS-25687-1] c 35 N84-22928
- Ultrasonic angle beam standard reflector --- ultrasonic nondestructive inspection  
[NASA-CASE-LAR-13153-1] c 71 N86-21276

## ULTRASONIC RADIATION

- Ultrasonic biomedical measuring and recording apparatus --- for recording motion of internal organs such as heart valves  
[NASA-CASE-ARC-10597-1] c 52 N74-20726
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-1] c 52 N76-33835
- Biomedical ultrasonoscope  
[NASA-CASE-ARC-10994-2] c 52 N79-26771
- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- Acoustic radiation stress measurement  
[NASA-CASE-LAR-13440-1] c 71 N86-22307

## ULTRASONIC SCANNERS

- Cutting head for ultrasonic lithotripsy  
[NASA-CASE-GSC-12944-1] c 52 N86-19885

## ULTRASONIC TESTS

- Ultrasonic scanner for radial and flat panels  
[NASA-CASE-MFS-20335-1] c 35 N74-10415
- Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c 38 N74-15130
- Method and apparatus for nondestructive testing --- using high frequency arc discharges  
[NASA-CASE-MFS-21233-1] c 38 N74-15395
- CW ultrasonic bolt tensioning monitor  
[NASA-CASE-LAR-12016-1] c 39 N78-15512

## ULTRASONIC WAVE TRANSDUCERS

- Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514

- Ultrasonic bone densitometer  
[NASA-CASE-MFS-20994-1] c 35 N75-12271
- Reference apparatus for medical ultrasonic transducer  
[NASA-CASE-ARC-10753-1] c 54 N75-27760
- Ultrasonic calibration device --- for producing changes in acoustic attenuation and phase velocity  
[NASA-CASE-LAR-11435-1] c 35 N76-15432
- Coupling apparatus for ultrasonic medical diagnostic system  
[NASA-CASE-NPO-13935-1] c 52 N79-14751
- CDS solid state phase insensitive ultrasonic transducer --- annealing cadmium sulfide crystals  
[NASA-CASE-LAR-12304-1] c 35 N80-20559
- Liquid-immersible electrostatic ultrasonic transducer  
[NASA-CASE-LAR-12465-1] c 33 N82-26572
- Ultrasonic transducer with Gaussian radial pressure distribution  
[NASA-CASE-LAR-12967-1] c 35 N84-22932
- Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913
- Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1CU] c 35 N86-32700
- ULTRASONIC WELDING**
- Ultrasonically bonded valve assembly  
[NASA-CASE-NPO-13360-1] c 37 N75-25185
- ULTRASONICS**
- Methods and apparatus employing vibratory energy for wrenching Patent  
[NASA-CASE-MFS-20586] c 15 N71-17686
- Pseudo continuous wave instrument --- ultrasonics  
[NASA-CASE-LAR-12260-1] c 35 N79-10390
- Dual differential interferometer  
[NASA-CASE-LAR-12966-1] c 35 N85-30282
- Method for thermal monitoring subcutaneous tissue  
[NASA-CASE-LAR-13028-1] c 52 N85-30618
- Ultrasonic depth gauge for liquids under high pressure  
[NASA-CASE-LAR-13300-1CU] c 35 N86-32700
- ULTRAVIOLET FILTERS**
- Ultraviolet filter  
[NASA-CASE-XNP-02340] c 23 N69-24332
- Ultraviolet resonance lamp Patent  
[NASA-CASE-ARC-10030] c 09 N71-12521
- ULTRAVIOLET LASERS**
- Stabilization of He2(a 3 Sigma u+) molecules in liquid helium by optical pumping for vacuum UV laser 6  
[NASA-CASE-NPO-13993-1] c 72 N79-13826
- ULTRAVIOLET RADIATION**
- Alkali-metal silicate protective coating  
[NASA-CASE-XGS-04119] c 18 N69-39979
- Ultraviolet resonance lamp Patent  
[NASA-CASE-ARC-10030] c 09 N71-12521
- Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896
- Phototropic composition of matter  
[NASA-CASE-XGS-03736] c 14 N72-22443
- Transmitting and reflecting diffuser --- for ultraviolet light  
[NASA-CASE-LAR-10385-2] c 70 N74-13436
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-1] c 27 N74-21156
- Light shield and cooling apparatus --- high intensity ultraviolet lamp  
[NASA-CASE-LAR-10089-1] c 34 N74-23066
- Flame detector operable in presence of proton radiation  
[NASA-CASE-MFS-21577-1] c 19 N74-29410
- Method and apparatus for generating coherent radiation in the ultra-violet region and above by use of distributed feedback  
[NASA-CASE-NPO-13346-1] c 36 N76-29575
- Ultraviolet and thermally stable polymer compositions  
[NASA-CASE-ARC-10592-2] c 27 N76-32315
- Vitro-violet process for producing flame resistant polyamides and products produced thereby --- protective clothing for high oxygen environments  
[NASA-CASE-MS-C-16074-1] c 27 N80-26446
- ULTRAVIOLET REFLECTION**
- Alkali metal silicate protective coating Patent  
[NASA-CASE-XGS-04799] c 18 N71-24183
- Ultraviolet light reflective coating  
[NASA-CASE-GSC-11786-1] c 24 N76-24363
- Transmitting and reflecting diffuser --- using ultraviolet grade fused silica coatings  
[NASA-CASE-LAR-10385-3] c 74 N78-15879
- ULTRAVIOLET SPECTRA**
- Ultraviolet atomic emission detector  
[NASA-CASE-HON-10756-1] c 14 N72-25428
- ULTRAVIOLET SPECTROMETERS**
- Concave grating spectrometer Patent  
[NASA-CASE-XGS-01036] c 14 N70-40003
- Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699
- UMBILICAL CONNECTORS**
- Umbilical separator for rockets Patent  
[NASA-CASE-XNP-00425] c 11 N70-38202



Umbilical disconnect Patent  
[NASA-CASE-XLA-00711] c 03 N71-12258

Remote controlled tubular disconnect Patent  
[NASA-CASE-XLA-01396] c 03 N71-12259

Serpentuator Patent  
[NASA-CASE-XMF-05344] c 31 N71-16345

Breakaway connector  
[NASA-CASE-NPO-11140] c 15 N72-17455

Quick disconnect coupling  
[NASA-CASE-NPO-11202] c 15 N72-25450

Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540

High acceleration cable deployment system  
[NASA-CASE-ARC-11256-1] c 15 N82-24272

**UMBILICAL TOWERS**

Emergency escape system Patent  
[NASA-CASE-XKS-02342] c 05 N71-11199

**UNDERWATER ENGINEERING**

Ejectable underwater sound source recovery assembly  
[NASA-CASE-LAR-10595-1] c 35 N74-16135

Underwater seismic source --- for petroleum exploration  
[NASA-CASE-NPO-14255-1] c 46 N79-23555

**UNDERWATER TESTS**

Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332] c 05 N72-20097

Underwater space suit pressure control regulator  
[NASA-CASE-MFS-20332-2] c 05 N73-25125

**UNIFORM FLOW**

Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c 09 N75-12969

**UNIONS (CONNECTORS)**

Beam connector apparatus and assembly  
[NASA-CASE-MFS-25134-1] c 31 N83-31895

Preloaded space structural coupling joints  
[NASA-CASE-LAR-13489-1] c 18 N86-31630

**UNLOADING**

Bootstrap unloader Patent  
[NASA-CASE-XNP-08768] c 09 N71-12516

**UNMANNED SPACECRAFT**

Material handling device Patent  
[NASA-CASE-XNP-08770-3] c 11 N71-27036

**UNSATURATION (CHEMISTRY)**

Stabilized unsaturated polyesters  
[NASA-CASE-NPO-16103-1] c 27 N85-29043

**UP-CONVERTERS**

Method and apparatus for quadriphase-shift-key and linear phase modulation  
[NASA-CASE-NPO-14444-1] c 33 N81-15192

**UPPER ATMOSPHERE**

Telespectrograph Patent  
[NASA-CASE-XLA-03273] c 14 N71-18699

Apparatus for sampling particulates in gases  
[NASA-CASE-HQN-10037-1] c 14 N73-27376

Rocket having barium release system to create ion clouds in the upper atmosphere  
[NASA-CASE-LAR-10670-2] c 15 N74-27360

Microwave limb sounder --- measuring trace gases in the upper atmosphere  
[NASA-CASE-NPO-14544-1] c 46 N82-12685

**URANIUM 235**

Isotope separation using metallic vapor lasers  
[NASA-CASE-NPO-13550-1] c 36 N77-26477

**UREAS**

Aldehyde-containing urea-absorbing polysaccharides  
[NASA-CASE-NPO-13620-1] c 27 N77-30236

Dialysis system --- using ion exchange resin membranes permeable to urea molecules  
[NASA-CASE-NPO-14101-1] c 52 N80-14687

Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c 27 N80-23452

**URETHANES**

Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104

**URINALYSIS**

Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754

Method of detecting and counting bacteria in body fluids  
[NASA-CASE-GSC-11092-2] c 04 N73-27052

Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions  
[NASA-CASE-GSC-11169-2] c 05 N73-32011

Determination of antimicrobial susceptibilities on infected urines without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750

**URINATION**

Open type urine receptacle  
[NASA-CASE-MS-12324-1] c 05 N72-22093

Urine collection device  
[NASA-CASE-MS-16433-1] c 52 N81-24711

Urine collection apparatus --- feminine hygiene  
[NASA-CASE-MS-18381-1] c 52 N81-28740

**URINE**

Urine collection device  
[NASA-CASE-MS-16433-1] c 52 N78-27750

**UROLOGY**

Urine collection device  
[NASA-CASE-MS-16433-1] c 52 N81-24711

**UTERUS**

Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer  
[NASA-CASE-GSC-12081-2] c 52 N82-22875

**V**

**V GROOVES**

Vee-notching device --- with adjustable carriage  
[NASA-CASE-MFS-20730-1] c 39 N74-13131

Complementary DMOS-V MOS integrated circuit structure  
[NASA-CASE-GSC-12190-1] c 33 N79-12321

High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177

**VACANCIES (CRYSTAL DEFECTS)**

Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c 26 N77-28265

**VACUUM**

Depositing semiconductor films utilizing a thermal gradient  
[NASA-CASE-XKS-04614] c 15 N69-21480

Superconducting magnet Patent  
[NASA-CASE-XNP-06503] c 23 N71-29049

Thermocouples of molybdenum and iridium alloys for more stable vacuum-high temperature performance  
[NASA-CASE-LEW-12174-2] c 35 N79-14346

Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450

Spray applicator for spraying coatings and other fluids in space  
[NASA-CASE-MS-18852-1] c 37 N85-29283

**VACUUM APPARATUS**

Null-type vacuum microbalance Patent  
[NASA-CASE-XAC-00472] c 15 N70-40180

Evacuation port seal Patent  
[NASA-CASE-XMF-03290] c 15 N71-23256

Apparatus for testing polymeric materials Patent  
[NASA-CASE-XNP-09698] c 06 N71-24607

Trap for preventing diffusion pump backstreaming  
[NASA-CASE-GSC-10518-1] c 15 N72-22489

Inductance device with vacuum insulation  
[NASA-CASE-LEW-10330-1] c 09 N72-27226

Apparatus for producing metal powders  
[NASA-CASE-XLE-06461-2] c 17 N72-28535

Vacuum probe surface sampler  
[NASA-CASE-LAR-10623-1] c 14 N73-30395

Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612

Apparatus for positioning modular components on a vertical or overhead surface  
[NASA-CASE-LAR-11465-1] c 37 N76-21554

Safety shield for vacuum/pressure chamber viewing port  
[NASA-CASE-GSC-12513-1] c 31 N81-19343

Head for high speed spinner having a vacuum chuck --- holding silicon dioxide chips for etching  
[NASA-CASE-NPO-15227-1] c 37 N81-33482

Static continuous electrophoresis device  
[NASA-CASE-MFS-25306-1] c 25 N83-13187

Method and apparatus for supercooling and solidifying substances  
[NASA-CASE-MFS-25242-1] c 35 N83-29650

**VACUUM CHAMBERS**

High-vacuum condenser tank for ion rocket tests Patent  
[NASA-CASE-XLE-00168] c 11 N70-33278

Split welding chamber Patent  
[NASA-CASE-LEW-11531] c 15 N71-14932

Space environmental work simulator Patent  
[NASA-CASE-XMF-07488] c 11 N71-16773

Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent  
[NASA-CASE-XLE-00787] c 14 N71-21090

Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994

Cryogenic feedthrough  
[NASA-CASE-LAR-10031] c 15 N72-22484

Altitude simulation chamber for rocket engine testing  
[NASA-CASE-MFS-20620] c 11 N72-27262

Evacuation valve  
[NASA-CASE-LAR-10061-1] c 15 N72-31483

Method and apparatus for determining the contents of contained gas samples  
[NASA-CASE-GSC-10903-1] c 14 N73-12444

Test stand system for vacuum chambers  
[NASA-CASE-MFS-21362] c 11 N73-20267

Atomic hydrogen storage --- cryotrapping and magnetic field strength  
[NASA-CASE-LEW-12081-2] c 28 N80-20402

Containerless high temperature calorimeter apparatus  
[NASA-CASE-MFS-23923-1] c 35 N81-19426

Hermetic seal for a shaft  
[NASA-CASE-NPO-15115-1] c 37 N82-24493

Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-15670-1] c 33 N82-33634

Sphere forming method and apparatus  
[NASA-CASE-NPO-15070-1] c 31 N83-35176

Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884

**VACUUM DEPOSITION**

A method for the deposition of beta-silicon carbide by isoeptaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482

Vacuum deposition apparatus Patent  
[NASA-CASE-XMF-01687] c 15 N71-17647

Evaporant source for vapor deposition Patent  
[NASA-CASE-XMF-06065] c 15 N71-20395

Vacuum evaporator with electromagnetic ion steering Patent  
[NASA-CASE-NPO-10331] c 09 N71-26701

Preparation of dielectric coating of variable dielectric constant by plasma polymerization  
[NASA-CASE-ARC-10892-2] c 27 N79-14214

Refractory coatings and method of producing the same  
[NASA-CASE-LEW-13169-1] c 26 N82-29415

Diamondlike flakes  
[NASA-CASE-LEW-13837-2] c 24 N85-21267

**VACUUM EFFECTS**

High power RF coaxial switch  
[NASA-CASE-NPO-14229-1] c 33 N80-18285

**VACUUM FURNACES**

Apparatus for inserting and removing specimens from high temperature vacuum furnaces  
[NASA-CASE-LAR-10841-1] c 31 N74-27900

**VACUUM GAGES**

Thermopile vacuum gage tube simulator Patent  
[NASA-CASE-XLA-02758] c 14 N71-18481

Gauge calibration by diffusion  
[NASA-CASE-XGS-07752] c 14 N73-30390

Ultrahigh vacuum measuring ionization gauge  
[NASA-CASE-XLA-05087] c 14 N73-30391

In situ transfer standard for ultrahigh vacuum gage calibration  
[NASA-CASE-LAR-10862-1] c 35 N74-15092

**VACUUM MELTING**

High temperature furnace for melting materials in space  
[NASA-CASE-MFS-20710] c 11 N72-23215

**VACUUM PUMPS**

Pressure control valve --- inflating flexible bladders  
[NASA-CASE-ARC-11251-1] c 37 N81-17433

**VACUUM SPECTROSCOPY**

Optical multiple sample vacuum integrating sphere  
[NASA-CASE-GSC-12849-1] c 74 N86-26190

**VACUUM SYSTEMS**

Shrink-fit gas valve Patent  
[NASA-CASE-XGS-00587] c 15 N70-35087

Cryogenic connector for vacuum use Patent  
[NASA-CASE-XGS-02441] c 15 N70-41629

Ionization vacuum gauge with all but the end of the ion collector shielded Patent  
[NASA-CASE-XLA-07424] c 14 N71-18482

Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c 14 N71-18483

Vacuum leak detector  
[NASA-CASE-LAR-11237-1] c 35 N75-19612

Ampoule sealing apparatus and process --- for housing a semiconductor growth charge under vacuum  
[NASA-CASE-LAR-12847-1] c 33 N83-16633

**VACUUM TUBES**

Integrated structure vacuum tube  
[NASA-CASE-ARC-10445-1] c 31 N76-31365

Method of purifying metallurgical grade silicon employing reduced pressure atmospheric control  
[NASA-CASE-NPO-14474-1] c 26 N80-14229

**VALUE**

High impact pressure regulator Patent  
[NASA-CASE-NPO-10175] c 14 N71-18625

**VALVES**

Valve actuator Patent  
[NASA-CASE-XHQ-01208] c 15 N70-35409

Fluid coupling Patent  
[NASA-CASE-XLE-00397] c 15 N70-36492

High pressure four-way valve Patent  
[NASA-CASE-XNP-00214] c 15 N70-36908

Reinforcing means for diaphragms Patent  
[NASA-CASE-XNP-01962] c 32 N70-41370

Multiway vortex valve system Patent  
[NASA-CASE-XMF-04709] c 15 N71-15609

Multiple orifice throttle valve Patent  
[NASA-CASE-XNP-09698] c 15 N71-18580

High pressure air valve Patent  
[NASA-CASE-MSC-11010] c 15 N71-19485

Valve seat with resilient support member Patent  
[NASA-CASE-XKS-02582] c 15 N71-21234

Positive locking check valve Patent  
[NASA-CASE-XMS-09310] c 15 N71-22708

Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191

Valve seat  
[NASA-CASE-NPO-10606] c 15 N72-25451

Evacuation valve  
[NASA-CASE-LAR-10061-1] c 15 N72-31483

Flow control valve --- for high temperature fluids  
[NASA-CASE-NPO-11951-1] c 37 N74-21065

Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136

Reciprocating engines  
[NASA-CASE-MSC-18239-1] c 37 N81-32510

Prosthetic occlusive device for an internal passageway  
[NASA-CASE-MFS-25740-1] c 52 N84-11744

Moisture content and gas sampling device  
[NASA-CASE-MSC-18866-1] c 35 N85-29213

Linear motion valve  
[NASA-CASE-MSC-20148-1] c 37 N85-29284

Reactant pressure differential control for fuel cell gases  
[NASA-CASE-MSC-20127-2] c 37 N85-34403

**VANES**

Solar vane actuator Patent  
[NASA-CASE-XNP-05535] c 14 N71-23040

Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420

Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639

Method of protecting a surface with a silicon-slurry/aluminide coating --- coatings for gas turbine engine blades and vanes  
[NASA-CASE-LEW-13343-1] c 27 N82-28441

**VAPOR DEPOSITION**

A method for the deposition of beta-silicon carbide by isopitaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482

Apparatus for producing high purity silicon carbide crystals Patent  
[NASA-CASE-XLA-02057] c 26 N70-40015

Method of changing the conductivity of vapor deposited gallium arsenide by the introduction of water into the vapor deposition atmosphere Patent  
[NASA-CASE-XNP-01961] c 26 N71-29156

Tungsten contacts on silicon substrates  
[NASA-CASE-GSC-10695-1] c 09 N72-25259

Deposition apparatus  
[NASA-CASE-LAR-10541-1] c 15 N72-32487

Deposition of alloy films --- on irregularly shaped metal object  
[NASA-CASE-LEW-11262-1] c 27 N74-13270

System for depositing thin films  
[NASA-CASE-MFS-20775-1] c 31 N75-12161

Vapor deposition apparatus --- semiconductors and gallium arsenides  
[NASA-CASE-HQN-10462] c 25 N75-29192

Chemical vapor deposition reactor --- providing uniform film thickness  
[NASA-CASE-NPO-13650-1] c 25 N79-28253

Corrosion resistant coating  
[NASA-CASE-NPO-15928-1] c 26 N85-29005

Advanced vapor supply manifold  
[NASA-CASE-LAR-13259-1] c 37 N86-20800

**VAPOR PHASES**

Fluid dispensing apparatus and method Patent  
[NASA-CASE-XLE-01182] c 27 N71-15635

Simple method of making photovoltaic junctions Patent  
[NASA-CASE-XNP-01960] c 09 N71-23027

Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199

Propellant mass distribution metering apparatus Patent  
[NASA-CASE-NPO-10185] c 10 N71-26339

Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N86-20721

**VAPOR PRESSURE**

Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c 15 N70-34247

Vapor liquid separator Patent  
[NASA-CASE-XMF-04042] c 15 N71-23023

Method and apparatus for convection control of metallic halide vapor density in a metallic halide laser  
[NASA-CASE-NPO-15021-1] c 36 N83-10417

**VAPOR TRAPS**

Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c 14 N71-18483

**VAPORIZERS**

Boiler for generating high quality vapor Patent  
[NASA-CASE-XLE-00785] c 33 N71-16104

Particle analyzing method and apparatus  
[NASA-CASE-NPO-15292-1] c 35 N83-27184

Continuous laminar smoke generator  
[NASA-CASE-LAR-13014-1] c 09 N85-21178

**VAPORIZING**

Gas liquefaction and dispensing apparatus Patent  
[NASA-CASE-NPO-10070] c 15 N71-27372

Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025

**VAPORS**

Advanced vapor supply manifold  
[NASA-CASE-LAR-13259-1] c 37 N86-20800

**VARACTOR DIODE CIRCUITS**

Phase modulator Patent  
[NASA-CASE-MSC-13201-1] c 07 N71-28429

**VARACTOR DIODES**

Varactor high level mixer  
[NASA-CASE-XGS-02171] c 09 N69-24324

Multiple varactor frequency doubler Patent  
[NASA-CASE-XMF-04958-1] c 10 N71-26414

Millimeter wave pumped parametric amplifier  
[NASA-CASE-GSC-11617-1] c 33 N74-32660

Maser cavity servo-tuning system  
[NASA-CASE-NPO-15890-1-CU] c 33 N85-29143

**VARIABILITY**

Variable speed drive  
[NASA-CASE-GSC-12643-1] c 37 N83-26078

Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551

**VARIABLE CYCLE ENGINES**

Dual cycle aircraft turbine engine  
[NASA-CASE-LAR-11310-1] c 07 N77-28118

Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384

Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067

**VARIABLE GEOMETRY STRUCTURES**

Landing arrangement for aerial vehicles Patent  
[NASA-CASE-XLA-00142] c 02 N70-33286

Variable geometry wind tunnels  
[NASA-CASE-XLA-07430] c 11 N72-22246

Aircraft engine nozzle  
[NASA-CASE-ARC-10877-1] c 07 N80-32392

**VARIABLE PITCH PROPELLERS**

Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c 07 N77-14025

Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468

**VARIABLE SWEEP WINGS**

Variable sweep wing configuration Patent  
[NASA-CASE-XLA-00230] c 02 N70-33255

Variable sweep wing aircraft Patent  
[NASA-CASE-XLA-00221] c 02 N70-33266

Variable-span aircraft Patent  
[NASA-CASE-XLA-00166] c 02 N70-34178

Variable sweep aircraft wing Patent  
[NASA-CASE-XLA-00350] c 02 N70-38011

Variable sweep aircraft Patent  
[NASA-CASE-XLA-03659] c 02 N71-11041

Dual-fuselage aircraft having yawable wing and horizontal stabilizer  
[NASA-CASE-ARC-10470-1] c 02 N73-26005

**VARIABLE THRUST**

Variable thrust ion engine utilizing thermally decomposable solid fuel Patent  
[NASA-CASE-XMF-00923] c 28 N70-36802

Method for continuous variation of propellant flow and thrust in propulsive devices Patent  
[NASA-CASE-XLE-00177] c 28 N70-40367

Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055

**VARIATIONS**

Bidirectional step torque filter with zero backlash characteristic Patent  
[NASA-CASE-XGS-04227] c 15 N71-21744

**VECTOR ANALYSIS**

Two force component measuring device Patent  
[NASA-CASE-XAC-04886-1] c 14 N71-20439

**VECTOR CURRENTS**

Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N86-19613

**VECTOCARDIOGRAPHY**

Biomedical electrode arrangement Patent  
[NASA-CASE-XFR-10856] c 05 N71-11189

**VEGETATION GROWTH**

Rotary plant growth accelerating apparatus --- weightlessness  
[NASA-CASE-ARC-10722-1] c 51 N75-25503

Remote sensing of vegetation and soil using microwave ellipsometry  
[NASA-CASE-GSC-11976-1] c 43 N78-10529

Enhancement of in vitro guayule propagation  
[NASA-CASE-NPO-15213-1] c 51 N83-17045

**VEHICLE WHEELS**

Deformable vehicle wheel Patent  
[NASA-CASE-MFS-20400] c 31 N71-18611

Resilient wheel Patent  
[NASA-CASE-MFS-13929] c 15 N71-27091

Omnidirectional wheel  
[NASA-CASE-MFS-21309-1] c 37 N74-18125

Two speed drive system --- mechanical device for changing speed on rotating vehicle wheel  
[NASA-CASE-MFS-20645-1] c 37 N74-23070

Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477

Improved tire/wheel concept --- pneumatic aircraft tire  
[NASA-CASE-LAR-11695-2] c 37 N80-18402

Tire/wheel concept  
[NASA-CASE-LAR-11695-2] c 37 N81-24443

Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587

**VEHICLES**

Magnetic suspension and pointing system  
[NASA-CASE-LAR-11889-2] c 37 N78-27424

**VEHICULAR TRACKS**

Suspension system for a wheel rolling on a flat track --- bearings for directional antennas  
[NASA-CASE-NPO-14395-1] c 37 N82-21587

Improvements in tank tread assemblies  
[NASA-CASE-NPO-16321-1] c 37 N85-29291

**VELOCITY**

Velocity limiting safety system Patent  
[NASA-CASE-XLA-07473] c 15 N71-24895

**VELOCITY COUPLING**

Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568

**VELOCITY MEASUREMENT**

Micrometeoroid velocity measuring device Patent  
[NASA-CASE-XLA-00495] c 14 N70-41332

Superconductive accelerometer Patent  
[NASA-CASE-XMF-01099] c 14 N71-15969

Gravimeter Patent  
[NASA-CASE-XMF-05844] c 14 N71-17587

Laser Doppler system for measuring three dimensional vector velocity Patent  
[NASA-CASE-MFS-20386] c 21 N71-19212

Particle detection apparatus including a ballistic pendulum Patent  
[NASA-CASE-XMS-04201] c 14 N71-22990

Angular velocity and acceleration measuring apparatus  
[NASA-CASE-ERC-10292] c 14 N72-25410

Flow velocity and directional instrument  
[NASA-CASE-LAR-10855-1] c 14 N73-13415

Doppler shift system --- system for measuring velocities of radiating particles  
[NASA-CASE-HQN-10740-1] c 72 N74-19310

Tachometer  
[NASA-CASE-MFS-23175-1] c 35 N77-30436

Velocity measurement system  
[NASA-CASE-MFS-23363-1] c 35 N78-32396

Fluid velocity measuring device  
[NASA-CASE-LAR-11729-1] c 34 N79-12359

Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036

Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N84-25015

Fluidic angular velocity sensor  
[NASA-CASE-NPO-16479-1CU] c 35 N86-32695

Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697

**VELOCITY MODULATION**

Molecular beam velocity selector Patent  
[NASA-CASE-XLE-01533] c 11 N71-10777

Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent  
[NASA-CASE-XGS-03532] c 14 N71-17627

Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N80-19425

**VENTILATION**

Protective garment ventilation system  
[NASA-CASE-XMS-04928] c 54 N78-17679

Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288

**VENTILATORS**

Heat sterilizable patient ventilator  
[NASA-CASE-NPO-13313-1] c 54 N75-27761

**VENTING**

Venting vapor apparatus Patent  
[NASA-CASE-XLE-00288] c 15 N70-34247

- Liquid storage tank venting device for zero gravity environment Patent  
[NASA-CASE-XLE-01449] c 15 N70-41846
- Valve seat with resilient support member Patent  
[NASA-CASE-XKS-02582] c 15 N71-21234
- Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c 05 N71-26333
- Solid propellant rocket motor  
[NASA-CASE-XNP-03282] c 28 N72-20758
- VENTURI TUBES**
- Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N86-24935
- VENUS (PLANET)**
- Space simulator Patent  
[NASA-CASE-XNP-00459] c 11 N70-38675
- VERTICAL FLIGHT**
- Aircraft instrument Patent  
[NASA-CASE-XLA-00487] c 14 N70-40157
- VERTICAL LANDING**
- Landing gear Patent  
[NASA-CASE-XMF-01174] c 02 N70-41589
- VERTICAL ORIENTATION**
- Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493
- VERTICAL TAKEOFF AIRCRAFT**
- Mechanical stability augmentation system Patent  
[NASA-CASE-XLA-06339] c 02 N71-13422
- Attitude controls for VTOL aircraft Patent  
[NASA-CASE-XAC-08972] c 02 N71-20570
- VERY HIGH FREQUENCIES**
- VHF/UHF parasitic probe antenna Patent  
[NASA-CASE-XKS-09340] c 07 N71-24614
- VERY LARGE SCALE INTEGRATION**
- Method of examining microcircuit patterns  
[NASA-CASE-NPO-16299-1] c 33 N85-20250
- Split-cross-bridge resistor for testing for proper fabrication of integrated circuits  
[NASA-CASE-NPO-16021-1] c 33 N85-30187
- VERY LONG BASE INTERFEROMETRY**
- System for real-time crustal deformation monitoring  
[NASA-CASE-NPO-14124-1] c 46 N80-14603
- VESTS**
- Life preserver Patent  
[NASA-CASE-XMS-00884] c 05 N70-36493
- VIBRATION**
- Passive caging mechanism Patent  
[NASA-CASE-GSC-10306-1] c 15 N71-24694
- Active vibration isolator for flexible bodies Patent  
[NASA-CASE-LAR-10106-1] c 15 N71-27169
- Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913
- Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752
- VIBRATION DAMPING**
- Viscous pendulum damper Patent  
[NASA-CASE-LAR-10274-1] c 14 N71-17626
- Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c 08 N71-29034
- Turbo-machine blade vibration damper Patent  
[NASA-CASE-XLE-00155] c 28 N71-29154
- Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583
- Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333
- Fluidic momentum controller  
[NASA-CASE-MSC-20906-1] c 18 N86-19344
- Variable friction secondary seal for face seals  
[NASA-CASE-LEW-14170-1] c 37 N86-25790
- VIBRATION EFFECTS**
- Thermal detector of electromagnetic energy by means of a vibrating electrode Patent  
[NASA-CASE-XAC-10788] c 09 N71-18830
- Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514
- Spherical bearing --- to reduce vibration effects  
[NASA-CASE-MFS-23447-1] c 37 N78-11404
- Self-locking double retention redundant full pin release  
[NASA-CASE-NPO-16233-1] c 37 N86-20801
- VIBRATION ISOLATORS**
- Variable stiffness polymeric damper  
[NASA-CASE-XAC-11225] c 14 N69-27486
- Miniature vibration isolator Patent  
[NASA-CASE-XLA-01018] c 15 N70-40156
- Vibration damping system Patent  
[NASA-CASE-XMS-01620] c 23 N71-15673
- Hermetic sealed vibration damper Patent  
[NASA-CASE-MSC-10959] c 15 N71-26243
- Dynamic vibration absorber Patent  
[NASA-CASE-LAR-10083-1] c 15 N71-27006
- Vibration isolation system using compression springs  
[NASA-CASE-NPO-11012] c 15 N72-11391
- Thrust-isolating mounting --- characteristics of support for loads mounted in spacecraft  
[NASA-CASE-MFS-21680-1] c 18 N74-27397
- Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573
- Thermal insulation attaching means --- adhesive bonding of felt vibration insulators under ceramic tiles  
[NASA-CASE-MSC-12619-2] c 27 N79-12221
- Shock isolator for operating a diode laser on a closed-cycle refrigerator  
[NASA-CASE-GSC-12297-1] c 37 N79-28549
- Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373
- Vibration isolation and pressure compensation apparatus for sensitive instrumentation  
[NASA-CASE-LAR-12728-1] c 35 N83-32026
- Aircraft rotor blade with passive tuned tab  
[NASA-CASE-ARC-11444-1] c 05 N85-29947
- Variable force, eddy-current or magnetic damper  
[NASA-CASE-LEW-13717-1] c 37 N85-30333
- Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797
- VIBRATION MEASUREMENT**
- Method and apparatus for measuring the damping characteristics of a structure  
[NASA-CASE-ARC-10154-1] c 14 N72-22440
- Method and apparatus for vibration analysis utilizing the Mossbauer effect  
[NASA-CASE-XMF-05882] c 35 N75-27329
- Displacement probes with self-contained exciting medium  
[NASA-CASE-LAR-11690-1] c 35 N80-14371
- Emitted vibration measurement device and method  
[NASA-CASE-MFS-25981-1] c 35 N85-20299
- VIBRATION METERS**
- Fiber optic vibration transducer and analyzer Patent  
[NASA-CASE-XMF-02433] c 14 N71-10616
- Ride quality meter  
[NASA-CASE-LAR-12882-1] c 35 N84-12445
- VIBRATION MODE**
- Function generator for synthesizing complex vibration mode patterns  
[NASA-CASE-LAR-10310-1] c 10 N73-20253
- VIBRATION SIMULATORS**
- Apparatus for vibrational testing of articles  
[NASA-CASE-GSC-11302-1] c 14 N73-13416
- VIBRATION TESTS**
- Peak acceleration limiter for vibrational tester Patent  
[NASA-CASE-NPO-10556] c 14 N71-27185
- Fixture for supporting articles during vibration tests  
[NASA-CASE-MFS-20523] c 14 N72-27412
- Apparatus for vibrational testing of articles  
[NASA-CASE-GSC-11302-1] c 14 N73-13416
- Multi axis vibration fixtures  
[NASA-CASE-MFS-20242] c 14 N73-19421
- Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12458-1] c 44 N83-21503
- VIBRATIONAL SPECTRA**
- Dynamic vibration absorber Patent  
[NASA-CASE-LAR-10083-1] c 15 N71-27006
- VIDEO COMMUNICATION**
- Means for generating a sync signal in an FM communication system Patent  
[NASA-CASE-XNP-10830] c 07 N71-11281
- Reduced bandwidth video communication system utilizing sampling techniques Patent  
[NASA-CASE-XNP-02791] c 07 N71-23026
- Video communication system and apparatus Patent  
[NASA-CASE-XNP-06611] c 07 N71-26102
- Sampling video compression system  
[NASA-CASE-ARC-10984-1] c 32 N77-24328
- VIDEO DATA**
- Digital television camera control system Patent  
[NASA-CASE-XNP-01472] c 14 N70-41807
- Transient video signal recording with expanded playback  
[NASA-CASE-ARC-10003-1] c 09 N71-25886
- Facsimile video remodulation network  
[NASA-CASE-GSC-10185-1] c 07 N72-12081
- Dual digital video switcher  
[NASA-CASE-KSC-10782-1] c 33 N75-30431
- Neighborhood comparison operator  
[NASA-CASE-NPO-16464-1CU] c 60 N86-24224
- VIDEO EQUIPMENT**
- Television signal processing system Patent  
[NASA-CASE-NPO-10140] c 07 N71-24742
- Video sync processor Patent  
[NASA-CASE-KSC-10002] c 10 N71-25865
- Video communication system and apparatus Patent  
[NASA-CASE-XNP-06611] c 07 N71-26102
- Video signal enhancement system with dynamic range compression and modulation index expansion Patent  
[NASA-CASE-NPO-10343] c 07 N71-27341
- Broadband video process with very high input impedance  
[NASA-CASE-NPO-10199] c 09 N72-17156
- Electronic video editor  
[NASA-CASE-KSC-10003] c 10 N73-13235
- Scan converting video tape recorder  
[NASA-CASE-NPO-10166-1] c 07 N73-22076
- Scan converting video tape recorder  
[NASA-CASE-NPO-10166-2] c 35 N76-16391
- Stack plume visualization system  
[NASA-CASE-LAR-11675-1] c 45 N76-17656
- Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1SB] c 54 N86-22114
- Programmable pipelined image processor  
[NASA-CASE-NPO-16461-1CU] c 60 N86-23283
- Laser ranging and video display system  
[NASA-CASE-MSC-20870-1] c 36 N86-24977
- VIDEO SIGNALS**
- Programmable scan/read circuitry for charge coupled device imaging detectors --- spacecraft attitude control and star trackers  
[NASA-CASE-NPO-15345-1] c 74 N84-23247
- Television camera video level control system  
[NASA-CASE-MSC-18578-1] c 32 N85-21427
- Method and apparatus for telemetry adaptive bandwidth compression  
[NASA-CASE-MSC-20821-1] c 17 N86-20466
- VIDICONS**
- Method of erasing target material of a vidicon tube or the like Patent  
[NASA-CASE-XNP-06028] c 09 N71-23189
- Material handling device Patent  
[NASA-CASE-MFS-09770-3] c 11 N71-27036
- VIEWING**
- Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920
- Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N85-28951
- VINYL COPOLYMERS**
- Vinyl styrylpyridines and their copolymerization with bismaleimide resins  
[NASA-CASE-ARC-11429-1-CU] c 27 N84-16341
- Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560
- VINYL POLYMERS**
- Method of using photovoltaic cell using poly-N-vinylcarbazole complex Patent  
[NASA-CASE-NPO-10373] c 03 N71-18698
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-1] c 27 N78-32256
- Compound oxidized styrylphosphine --- flame resistant vinyl polymers  
[NASA-CASE-MSC-14903-2] c 27 N80-10358
- Heat resistant polymers of oxidized styrylphosphine  
[NASA-CASE-MSC-14903-3] c 27 N80-24438
- VINYLDIENE**
- Dicyanocacetylene polymers Patent  
[NASA-CASE-XNP-03250] c 06 N71-23500
- VIRUSES**
- Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10893
- VISCOELASTICITY**
- Resilience testing device Patent  
[NASA-CASE-XLA-08254] c 14 N71-26161
- Parallel-plate viscometer with double diaphragm suspension  
[NASA-CASE-NPO-11387] c 14 N73-14429
- Shock absorbing mount for electrical components  
[NASA-CASE-NPO-13253-1] c 37 N75-18573
- Viscoelastic cationic polymers containing the urethane linkage  
[NASA-CASE-NPO-10830-1] c 27 N81-15104
- VISCOMETERS**
- Parallel plate viscometer Patent  
[NASA-CASE-NPO-09482] c 14 N71-17584
- Parallel-plate viscometer with double diaphragm suspension  
[NASA-CASE-NPO-11387] c 14 N73-14429
- VISCOSITY**
- Low viscosity magnetic fluid obtained by the colloidal suspension of magnetic particles Patent  
[NASA-CASE-XLE-01512] c 12 N70-40124
- Viscosity measuring instrument  
[NASA-CASE-NPO-14501-1] c 35 N80-18357
- Process of end-capping a polyimide system  
[NASA-CASE-LAR-13135-1] c 27 N86-19456
- VISCOUS DAMPING**
- Variable stiffness polymeric damper  
[NASA-CASE-XAC-11225] c 14 N69-27486
- Viscous-pendulum-damper Patent  
[NASA-CASE-XLA-02079] c 12 N71-16894
- Viscous pendulum damper Patent  
[NASA-CASE-LAR-10274-1] c 14 N71-17626

- Multiple plate hydrostatic viscous damper  
[NASA-CASE-LEW-12445-1] c 37 N81-22360
- VISIBILITY**  
Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c 11 N71-10748  
Reusable captive blind fastener  
[NASA-CASE-MSC-18742-1] c 37 N82-26673
- VISIBLE SPECTRUM**  
Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-18059
- VISION**  
Retinally stabilized differential resolution television display  
[NASA-CASE-NPO-15432-1] c 32 N85-29117
- VISORS**  
Anti-fog composition --- for prevention of fogging on surfaces such as space helmet visors and windshields  
[NASA-CASE-MSC-13530-2] c 23 N75-14834
- VISUAL ACUITY**  
Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c 54 N75-27759
- VISUAL CONTROL**  
Visual target for retrofire attitude control  
[NASA-CASE-XMS-12158-1] c 31 N89-27499  
Spectrally balanced chromatic landing approach lighting system  
[NASA-CASE-ARC-10990-1] c 04 N82-18059
- VISUAL FIELDS**  
Visual examination apparatus  
[NASA-CASE-ARC-10329-1] c 05 N73-26072  
Visual examination apparatus  
[US-PATENT-RE-28,921] c 52 N76-30793  
Binocular device for displaying numerical information in field of view  
[NASA-CASE-LAR-11782-1] c 74 N77-20882  
Visual accommodation trainer-tester  
[NASA-CASE-ARC-11426-1] c 09 N84-12193
- VISUAL OBSERVATION**  
Automatic visual inspection system for microelectronics  
[NASA-CASE-NPO-13282] c 38 N78-17396
- VISUAL PERCEPTION**  
Liquid flow sight assembly Patent  
[NASA-CASE-XLE-02998] c 14 N70-42074  
Aircraft control position indicator  
[NASA-CASE-LAR-12884-1] c 06 N84-20522
- VISUAL STIMULI**  
Reaction tester  
[NASA-CASE-MSC-13604-1] c 05 N73-13114
- VOICE COMMUNICATION**  
Position location system and method Patent  
[NASA-CASE-GSC-10087-2] c 21 N71-13958  
Satellite communication system and method Patent  
[NASA-CASE-GSC-10118-1] c 07 N71-24621  
Protective suit having an audio transceiver Patent  
[NASA-CASE-KSC-10164] c 07 N71-33108  
Technique for recovery of voice data from heat damaged magnetic tape  
[NASA-CASE-MSC-14219-1] c 32 N74-27612  
Filtering device --- removing electromagnetic noise from voice communication signals  
[NASA-CASE-MFS-22729-1] c 32 N78-21366  
Real time analysis of voiced sounds  
[NASA-CASE-NPO-13465-1] c 32 N76-31372  
Satellite personal communications system  
[NASA-CASE-NPO-14480-1] c 32 N80-20448
- VOICE DATA PROCESSING**  
Digital communication system  
[NASA-CASE-MSC-13912-1] c 32 N74-30524  
Method and apparatus for operating on compressed PCM voice data  
[NASA-CASE-KSC-11285-1] c 32 N86-27513
- VOLATILITY**  
Apparatus for testing polymeric materials Patent  
[NASA-CASE-XNP-09699] c 06 N71-24607
- VOLT-AMPERE CHARACTERISTICS**  
Voltage-current characteristic simulator Patent  
[NASA-CASE-XMS-01554] c 10 N71-10578  
The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c 33 N77-10428  
Apparatus including a plurality of spaced transformers for locating short circuits in cables  
[NASA-CASE-KSC-10899-1] c 33 N79-18193
- VOLTAGE AMPLIFIERS**  
Electronic amplifier with power supply switching Patent  
[NASA-CASE-XMS-00945] c 09 N71-10798  
Bootstrap unloader Patent  
[NASA-CASE-XNP-09768] c 09 N71-12516  
Active RC networks  
[NASA-CASE-ARC-10020] c 10 N72-17172  
Wide range analog-to-digital converter with a variable gain amplifier  
[NASA-CASE-NPO-11018] c 08 N72-21200

- Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c 33 N80-18286  
Arc lamp power supply  
[NASA-CASE-LAR-13202-1] c 33 N86-32626
- VOLTAGE CONTROLLED OSCILLATORS**  
Pulsed phase locked loop strain monitor --- voltage controlled oscillators  
[NASA-CASE-LAR-12772-1] c 33 N83-16626  
Automatic oscillator frequency control system  
[NASA-CASE-GSC-12804-1] c 33 N86-20688  
Ferroresonant regulated power supply  
[NASA-CASE-NPO-15977-1-CU] c 33 N86-20673
- VOLTAGE CONVERTERS (DC TO DC)**  
Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c 33 N74-11049  
The dc-to-dc converters employing staggered-phase power switches with two-loop control  
[NASA-CASE-NPO-13512-1] c 33 N77-10428  
Inrush current limiter  
[NASA-CASE-GSC-11789-1] c 33 N77-14333  
Phase substitution of spare converter for a failed one of parallel phase staggered converters  
[NASA-CASE-NPO-13812-1] c 33 N77-30365  
Regulated high efficiency, lightweight capacitor-diode multiplier dc to dc converter  
[NASA-CASE-LEW-12791-1] c 33 N78-32341  
Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c 33 N81-19392  
Elimination of current spikes in buck power converters  
[NASA-CASE-NPO-14505-1] c 33 N81-19393  
Push-pull converter with energy saving circuit for protecting switching transistors from peak power stress  
[NASA-CASE-NPO-14316-1] c 33 N81-33404  
Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494  
A dc to dc converter  
[NASA-CASE-MFS-25430-1] c 33 N84-16453  
Simplified dc to dc converter  
[NASA-CASE-LEW-13495-1] c 33 N84-33663
- VOLTAGE GENERATORS**  
Pulsed energy power system Patent  
[NASA-CASE-MSC-13112] c 03 N71-11057  
Telemeter adaptable for implanting in an animal Patent  
[NASA-CASE-XAC-05706] c 05 N71-12342  
Multiple slope sweep generator Patent  
[NASA-CASE-XMS-03542] c 09 N71-28926  
Controllable load insensitive power converters  
[NASA-CASE-ERC-10268] c 09 N72-25252  
Driver for solar cell I-V characteristic plots  
[NASA-CASE-NPO-14096-1] c 44 N80-18551  
Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953
- VOLTAGE REGULATORS**  
Regulated dc to dc converter  
[NASA-CASE-XGS-03429] c 03 N69-21330  
Power control circuit  
[NASA-CASE-XNP-02713] c 10 N69-39888  
Amplifier drift tester  
[NASA-CASE-XMS-05582-1] c 09 N69-39986  
Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987  
Regulated power supply Patent  
[NASA-CASE-XMS-01991] c 09 N71-21449  
High voltage divider system Patent  
[NASA-CASE-XLE-02008] c 09 N71-21583  
Power supply circuit Patent  
[NASA-CASE-XMS-00913] c 10 N71-23543  
Voltage to frequency converter Patent  
[NASA-CASE-GSC-10022-1] c 10 N71-25882  
Buck boost voltage regulation circuit Patent  
[NASA-CASE-GSC-10735-1] c 10 N71-26085  
Automatic signal range selector for metering devices Patent  
[NASA-CASE-XMS-06497] c 14 N71-26244  
Voltage regulator with plural parallel power source sections Patent  
[NASA-CASE-GSC-10891-1] c 10 N71-26626  
Maximum power point tracker Patent  
[NASA-CASE-GSC-10376-1] c 14 N71-27407  
High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c 07 N71-33806  
Reference voltage switching unit  
[NASA-CASE-NPO-11253] c 09 N72-17157  
Switching regulator  
[NASA-CASE-LEW-11005-1] c 09 N72-21243  
Controllable load insensitive power converters  
[NASA-CASE-ERC-10268] c 09 N72-25252  
Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c 33 N74-11049

- Overvoltage protection network  
[NASA-CASE-ARC-10197-1] c 33 N74-17929  
Low distortion automatic phase control circuit --- voltage controlled phase shifter  
[NASA-CASE-MFS-21671-1] c 33 N74-22885  
Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c 33 N75-19521  
Transformer regulated self-stabilizing chopper  
[NASA-CASE-XGS-09186] c 33 N78-17295  
Voltage regulator for battery power source --- using a bipolar transistor  
[NASA-CASE-FRC-10116-1] c 33 N79-23345  
Buck/boost regulator  
[NASA-CASE-GSC-12360-1] c 33 N81-19392  
Motor power factor controller with a reduced voltage starter  
[NASA-CASE-MFS-25586-1] c 33 N82-11360  
Pulse switching for high energy lasers  
[NASA-CASE-NPO-14556-1] c 33 N82-24418  
Three phase power factor controller  
[NASA-CASE-MFS-25535-2] c 33 N84-22885  
High voltage isolation transformer  
[NASA-CASE-GSC-12817-1] c 33 N85-29146  
Ferroresonant regulated power supply  
[NASA-CASE-NPO-15977-1-CU] c 33 N86-20673
- VOLTMETERS**  
Voltage monitoring system  
[NASA-CASE-KSC-10736-1] c 33 N75-19521
- VOLUMETRIC ANALYSIS**  
Volumetric direct nuclear pumped laser  
[NASA-CASE-LAR-12183-1] c 36 N79-18307
- VOMITING**  
Venting device for pressurized space suit helmet Patent  
[NASA-CASE-XMS-09652-1] c 05 N71-26333
- VORTEX BREAKDOWN**  
Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c 02 N77-10001
- VORTEX FLAPS**  
Leading edge vortex flaps for drag reduction --- during subsonic flight  
[NASA-CASE-LAR-12750-1] c 02 N81-19016
- VORTEX GENERATORS**  
Multiway vortex valve system Patent  
[NASA-CASE-XMF-04709] c 15 N71-15609  
Vortex generator for controlling the dispersion of effluents in a flowing liquid  
[NASA-CASE-LAR-12045-1] c 34 N77-24423  
Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c 07 N81-27096  
Vortex generating flow passage design for increased film cooling effectiveness  
[NASA-CASE-LEW-14039-1] c 34 N85-33433  
Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194
- VORTICES**  
Vortex-lift roll-control device  
[NASA-CASE-LAR-11868-2] c 08 N79-14108  
Pumped vortex  
[NASA-CASE-LAR-12625-1] c 02 N83-19715
- VULCANIZING**  
Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article  
[NASA-CASE-LAR-10489-1] c 31 N74-18124

## W

- WAFERS**  
Apparatus and method for separating a semiconductor wafer Patent  
[NASA-CASE-ERC-10138] c 26 N71-14354  
Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950  
System for slicing silicon wafers  
[NASA-CASE-NPO-14406-1] c 37 N80-29703  
Scriber for silicon wafers  
[NASA-CASE-NPO-15539-1] c 37 N82-11469  
Method of Fabricating Schottky Barrier solar cell  
[NASA-CASE-NPO-13689-4] c 44 N82-28780  
Method of making a high voltage V-groove solar cell  
[NASA-CASE-LEW-13401-1] c 44 N82-29709  
High voltage planar multijunction solar cell  
[NASA-CASE-LEW-13400-1] c 44 N82-31764  
Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-15670-1] c 33 N82-33634  
High voltage v-groove solar cell  
[NASA-CASE-LEW-13401-2] c 44 N83-32177  
Method of increasing minority carrier lifetime in silicon web or the like  
[NASA-CASE-NPO-15530-1] c 76 N83-35888

- Method for sequentially processing a multi-level interconnect circuit in a vacuum chamber  
[NASA-CASE-MFS-256704-1] c 33 N84-22884
- Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765
- Epitaxial thinning process  
[NASA-CASE-NPO-15786-1] c 76 N84-35112
- Process and apparatus for growing a crystal ribbon  
[NASA-CASE-NPO-15629-1] c 76 N84-35113
- Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N85-20535
- Ingot slicing machine and method  
[NASA-CASE-NPO-15483-1] c 37 N85-21650
- Floating emitter solar cell junction transistor  
[NASA-CASE-NPO-16467-1-CU] c 33 N86-24908
- Lithium counterdoped silicon solar cell  
[NASA-CASE-LEW-14177-1] c 44 N86-32875
- WALKING**  
Drop foot corrective device  
[NASA-CASE-LAR-12259-2] c 54 N86-22112
- WALL TEMPERATURE**  
Method of making apparatus for sensing temperature  
[NASA-CASE-XLE-05230-2] c 14 N73-13417
- Structural heat pipe --- for spacecraft wall thermal insulation system  
[NASA-CASE-GSC-11619-1] c 34 N75-12222
- Thermal control canister  
[NASA-CASE-GSC-12253-1] c 34 N79-31523
- Curved film cooling admission tube  
[NASA-CASE-LEW-13174-1] c 34 N83-27144
- WALLS**  
Formed metal ribbon wrap Patent  
[NASA-CASE-XLE-00164] c 15 N70-36411
- Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279
- Apparatus and method to keep the walls of a free-space reactor free from deposits of solid materials  
[NASA-CASE-NPO-15851-1] c 37 N85-21652
- WARNING SYSTEMS**  
Out of tolerance warning alarm system for plurality of monitored circuits Patent  
[NASA-CASE-XMS-10984-1] c 10 N71-19417
- Unsaturation saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893
- Electrical apparatus for detection of thermal decomposition of insulation Patent  
[NASA-CASE-XMF-03968] c 14 N71-27186
- Combustion products generating and metering device  
[NASA-CASE-GSC-11095-1] c 14 N72-10375
- Stacked array of omnidirectional antennas  
[NASA-CASE-LAR-10545-1] c 09 N72-21244
- Display research collision warning system  
[NASA-CASE-HQN-10703] c 21 N73-13643
- System for indicating direction of intruder aircraft  
[NASA-CASE-ERC-10226-1] c 14 N73-16483
- Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205
- Apparatus for aiding a pilot in avoiding a midair collision between aircraft  
[NASA-CASE-LAR-10717-1] c 21 N73-30641
- Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090
- Hearing aid malfunction detection system  
[NASA-CASE-MSC-14916-1] c 33 N78-10375
- Automatic communication signal monitoring system  
[NASA-CASE-NPO-13941-1] c 32 N79-10262
- Passive intrusion detection system  
[NASA-CASE-NPO-13804-1] c 33 N80-23559
- Scanning seismic intrusion detection method and apparatus --- monitoring unwanted subterranean entry and departure  
[NASA-CASE-ARC-11317-1] c 35 N83-34272
- WASHING**  
Method of neutralizing the corrosive surface of amine-cured epoxy resins  
[NASA-CASE-GSC-12686-1] c 27 N83-34039
- WASTE DISPOSAL**  
Relief container  
[NASA-CASE-XMS-06761] c 05 N69-23192
- An airlock  
[NASA-CASE-MFS-20922] c 31 N72-20840
- Liquid waste feed system  
[NASA-CASE-LAR-10365-1] c 05 N72-27102
- Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c 54 N74-20725
- Airlock  
[NASA-CASE-MFS-20922-1] c 18 N74-22136
- Automatic liquid inventory collecting and dispensing unit  
[NASA-CASE-LAR-11071-1] c 35 N75-19611
- Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c 54 N76-14804
- Absorbent product and articles made therefrom  
[NASA-CASE-MSC-18223-2] c 54 N84-11758
- WASTE ENERGY UTILIZATION**  
Automotive absorption air conditioner utilizing solar and motor waste heat  
[NASA-CASE-NPO-15183-1] c 44 N82-26776
- Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029
- Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389
- WASTE HEAT**  
Thermal control system --- removing waste heat from industrial process spacecraft  
[NASA-CASE-GSC-12771-1] c 34 N84-14461
- WASTE UTILIZATION**  
Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c 45 N79-12584
- WASTE WATER**  
Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747
- Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- WATER**  
High power-high voltage waterload Patent  
[NASA-CASE-XNP-05381] c 09 N71-20842
- Procedure and apparatus for determination of water in nitrogen tetroxide  
[NASA-CASE-NPO-10234] c 06 N72-17094
- Hydrogen rich gas generator  
[NASA-CASE-NPO-13342-1] c 37 N76-16446
- Solar hydrogen generator  
[NASA-CASE-LAR-11361-1] c 44 N77-22607
- Remote water monitoring system  
[NASA-CASE-LAR-11973-1] c 35 N78-27384
- Solar photolysis of water  
[NASA-CASE-NPO-14126-1] c 44 N79-11470
- A water-absorbing capacitor system for measuring relative humidity  
[NASA-CASE-NPO-16544-1-CU] c 35 N86-20755
- WATER FLOW**  
Potable water dispenser  
[NASA-CASE-MFS-21115-1] c 54 N74-12779
- Self-contained, single-use hose and tubing cleaning module  
[NASA-CASE-MSC-20857-1] c 37 N86-20807
- WATER INJECTION**  
Reentry communication by material addition Patent  
[NASA-CASE-XLA-01552] c 07 N71-11284
- WATER LANDING**  
Vehicle parachute and equipment jettison system Patent  
[NASA-CASE-XLA-00195] c 02 N70-38009
- Emergency earth orbital escape device  
[NASA-CASE-MSC-13281] c 31 N72-18859
- WATER MANAGEMENT**  
Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10960-1] c 03 N71-24718
- Solar-powered pump  
[NASA-CASE-NPO-13567-1] c 44 N76-29701
- WATER POLLUTION**  
Compact solar still Patent  
[NASA-CASE-XMS-04533] c 15 N71-23086
- Bacterial contamination monitor  
[NASA-CASE-GSC-10879-1] c 14 N72-25413
- Method and automated apparatus for detecting coliform organisms  
[NASA-CASE-MSC-16777-1] c 51 N80-27067
- WATER QUALITY**  
Fluid sample collection and distribution system --- qualitative analysis of aqueous samples from several points  
[NASA-CASE-MSC-16841-1] c 34 N79-24285
- Rapid, quantitative determination of bacteria in water --- adenosine triphosphate  
[NASA-CASE-GSC-12158-1] c 51 N83-27569
- Method for detecting coliform organisms  
[NASA-CASE-ARC-11322-1] c 51 N83-28849
- WATER RECLAMATION**  
Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207
- Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693
- Water separator  
[NASA-CASE-XMS-01295-1] c 37 N79-21345
- WATER RESOURCES**  
Radar target for remotely sensing hydrological phenomena  
[NASA-CASE-LAR-12344-1] c 43 N80-18498
- WATER TEMPERATURE**  
Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598
- WATER TREATMENT**  
Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10960-1] c 03 N71-24718
- Method of preparing water purification membranes --- polymerization of allyl amine as thin films in plasma discharge  
[NASA-CASE-ARC-10643-1] c 25 N75-12087
- Iodine generator for reclaimed water purification  
[NASA-CASE-MSC-14632-1] c 54 N78-14784
- Water system virus detection  
[NASA-CASE-MSC-16098-1] c 51 N79-10693
- Simultaneous treatment of SO<sub>2</sub> containing stack gases and waste water  
[NASA-CASE-MSC-16258-1] c 45 N79-12584
- Process for purification of waste water produced by a Kraft process pulp and paper mill  
[NASA-CASE-NPO-13847-2] c 85 N79-17747
- Ozonation of cooling tower waters  
[NASA-CASE-NPO-14340-1] c 45 N80-14579
- Reverse osmosis membrane of high urea rejection properties --- water purification  
[NASA-CASE-ARC-10980-1] c 27 N80-23452
- Membrane consisting of polyquaternary amine ion exchange polymer network interpenetrating the chains of thermoplastic matrix polymer  
[NASA-CASE-NPO-14001-1] c 27 N81-14076
- Sewage sludge additive  
[NASA-CASE-NPO-13877-1] c 45 N82-11634
- Method for treating wastewater using microorganisms and vascular aquatic plants  
[NASA-CASE-NSTL-10] c 45 N84-12654
- WATER VAPOR**  
Vapor pressure measuring system and method Patent  
[NASA-CASE-XMS-01618] c 14 N71-20741
- Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c 28 N81-24280
- Geodetic distance measuring apparatus  
[NASA-CASE-GSC-12609-2] c 36 N83-29681
- WATER WAVES**  
Surface roughness measuring system --- synthetic aperture radar measurements of ocean wave height and terrain peaks  
[NASA-CASE-NPO-13862-1] c 35 N79-10391
- Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667
- WATERPROOFING**  
Glass-to-metal seals comprising relatively high expansion metals  
[NASA-CASE-LEW-10698-1] c 37 N74-21063
- Elevated waterproof access floor system and method of making the same  
[NASA-CASE-ARC-11363-1] c 31 N83-28281
- WATERWAVE ENERGY CONVERSION**  
Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834
- WAVE AMPLIFICATION**  
Distributed feedback acoustic surface wave oscillator  
[NASA-CASE-NPO-13673-1] c 71 N77-26919
- WAVE DIFFRACTION**  
Diffraction grating configuration for X-ray and ultraviolet focusing  
[NASA-CASE-GSC-12357-1] c 74 N80-21140
- WAVE FRONT RECONSTRUCTION**  
Recording and reconstructing focused image holograms Patent  
[NASA-CASE-ERC-10017] c 16 N71-15567
- WAVE GENERATION**  
Wind tunnel airstream oscillating apparatus Patent  
[NASA-CASE-XLA-00112] c 11 N70-33287
- Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c 09 N70-41675
- Waveform simulator Patent  
[NASA-CASE-NPO-10251] c 10 N71-27365
- Wide band doubler and sine wave quadrature generator  
[NASA-CASE-NPO-11133] c 10 N72-20223
- Material suspension within an acoustically excited resonant chamber --- at near weightless conditions  
[NASA-CASE-NPO-13263-1] c 12 N75-24774
- Vibrating-chamber levitation systems  
[NASA-CASE-NPO-16142-1-CU] c 35 N86-20752
- WAVE INTERACTION**  
Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568
- WAVE PROPAGATION**  
Double reference pulsed phase locked loop (DRP-2L-2)  
[NASA-CASE-LAR-13310-1] c 32 N85-21441

## WAVE REFLECTION

- Microwave flaw detector Patent  
[NASA-CASE-ARC-10009-1] c 15 N71-17822  
Millimeter wave antenna system Patent Application  
[NASA-CASE-GSC-10949-1] c 07 N71-28965

## WAVE RESISTANCE

- Reactanceless synthesized impedance bandpass amplifier  
[NASA-CASE-GSC-12788-1] c 33 N85-29145

## WAVE SCATTERING

- Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662  
Method and apparatus for Delta Kappa synthetic aperture radar measurement of ocean current  
[NASA-CASE-NPO-15704-1] c 32 N85-34327

## WAVEFORMS

- Variable frequency magnetic multivibrator Patent  
[NASA-CASE-XGS-00131] c 09 N70-38995  
Single or joint amplitude distribution analyzer Patent  
[NASA-CASE-XNP-01383] c 09 N71-10659  
Peak polarity selector Patent  
[NASA-CASE-FRC-10010] c 10 N71-24862  
Family of frequency to amplitude converters  
[NASA-CASE-MSC-12395] c 09 N72-25257  
Apparatus for statistical time-series analysis of electrical signals  
[NASA-CASE-MSC-12428-1] c 10 N73-25240  
Low distortion receiver for bi-level baseband PCM waveforms  
[NASA-CASE-MSC-14557-1] c 32 N76-16249  
Speech analyzer  
[NASA-CASE-GSC-11898-1] c 32 N77-30309  
Lightning current waveform measuring system  
[NASA-CASE-KSC-11018-1] c 33 N79-10337

## WAVEGUIDE ANTENNAS

- Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c 07 N72-11148

## WAVEGUIDE FILTERS

- High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c 07 N71-33606

## WAVEGUIDE WINDOWS

- Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808

## WAVEGUIDES

- Dual waveguide mode source having control means for adjusting the relative amplitude of two modes Patent  
[NASA-CASE-XNP-03134] c 07 N71-10676  
Folded traveling wave maser structure Patent  
[NASA-CASE-XNP-05219] c 16 N71-15550  
Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065  
Waveguide mixer  
[NASA-CASE-ERC-10179] c 07 N72-20141  
Active microwave iris and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170  
Thin film microwave iris  
[NASA-CASE-LAR-10511-1] c 09 N72-29172  
Resonant waveguide stark cell --- using microwave spectrometers  
[NASA-CASE-LAR-11352-1] c 33 N75-26245  
Diffused waveguiding capillary tube with distributed feedback for a gas laser  
[NASA-CASE-NPO-13544-1] c 36 N76-18428  
Dielectric-loaded waveguide circulator for cryogenically cooled and cascaded maser waveguide structures  
[NASA-CASE-NPO-14254-1] c 36 N80-18372  
Support assembly for cryogenically coolable low-noise choke waveguide  
[NASA-CASE-NPO-14253-1] c 32 N80-32605  
Coaxial phased array antenna  
[NASA-CASE-MSC-16800-1] c 32 N81-14187  
Coupled cavity traveling wave tube with velocity tapering  
[NASA-CASE-LEW-12296-1] c 33 N82-26568  
Waveguide cooling system  
[NASA-CASE-NPO-15401-1] c 32 N83-27085

## WAVELENGTHS

- Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343  
Instrument for the quantitative measurement of radiation at multiple wave lengths Patent  
[NASA-CASE-XLE-00011] c 14 N70-41946  
Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c 14 N72-17323  
Two color horizon sensor  
[NASA-CASE-ERC-10174] c 14 N72-25409  
Monitoring deposition of films  
[NASA-CASE-MFS-20675] c 26 N73-26751  
Dual wavelength scanning Doppler velocimeter --- without perturbation of flow fields  
[NASA-CASE-ARC-10637-1] c 35 N75-16783

- Diatomic infrared gasdynamic laser --- for producing different wavelengths  
[NASA-CASE-ARC-10370-1] c 36 N75-31426  
Fluorescent radiation converter  
[NASA-CASE-GSC-12528-1] c 74 N81-24900  
Acoustic levitation methods and apparatus  
[NASA-CASE-NPO-15562-1] c 71 N82-27086  
Extended range X-ray telescope  
[NASA-CASE-MFS-25282-1] c 34 N83-19015  
Dual laser optical system and method for studying fluid flow  
[NASA-CASE-MFS-25315-1] c 36 N83-29680  
Acoustic suspension system  
[NASA-CASE-NPO-15435-1] c 71 N83-36846

## WAVES

- Natural turbulence electrical power generator --- using wave action or random motion  
[NASA-CASE-LAR-11551-1] c 44 N80-29834

## WEAR

- Refractory coatings  
[NASA-CASE-LEW-13169-2] c 26 N82-30371

## WEAR INHIBITORS

- Composite seal for turbomachinery  
[NASA-CASE-LEW-12313-3] c 37 N82-19540

## WEATHERPROOFING

- Weatherproof helix antenna Patent  
[NASA-CASE-XKS-08485] c 07 N71-19493

## WEBS (SHEETS)

- Method and apparatus for measuring web material wound on a reel  
[NASA-CASE-GSC-11902-1] c 38 N77-17495  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-1] c 35 N82-25484  
Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NASA-CASE-NPO-15494-2] c 35 N85-34373

## WEBS (SUPPORTS)

- Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-2] c 07 N78-18066  
Integrated gas turbine engine-nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096

## WEDGES

- Two dimensional wedge/translating shroud nozzle  
[NASA-CASE-LAR-11919-1] c 07 N78-27121  
Interlocking wedge joint  
[NASA-CASE-LAR-12729-1] c 37 N82-26676

## WEIGHT (MASS)

- Suspended mass impact damper Patent  
[NASA-CASE-LAR-10193-1] c 15 N71-27146  
System for indicating fuel-efficient aircraft altitude  
[NASA-CASE-NPO-15351-2] c 06 N84-34443

## WEIGHT INDICATORS

- Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945

## WEIGHT MEASUREMENT

- Automatic force measuring system Patent  
[NASA-CASE-XLA-02605] c 14 N71-10773  
Device for monitoring a change in mass in varying gravimetric environments  
[NASA-CASE-MFS-21556-1] c 35 N74-26945  
Portable pallet weighing apparatus  
[NASA-CASE-GSC-12789-1] c 35 N85-20294

## WEIGHTLESSNESS

- Apparatus for transferring cryogenic liquids Patent  
[NASA-CASE-XLE-00345] c 15 N70-38020  
Liquid-gas separation system Patent  
[NASA-CASE-XMS-01624] c 15 N70-40062  
Measuring device Patent  
[NASA-CASE-XMS-01546] c 14 N70-40233  
Zero gravity starting means for liquid propellant motors Patent  
[NASA-CASE-XNP-01390] c 28 N70-41275  
Liquid-gas separator for zero gravity environment Patent  
[NASA-CASE-XMS-01492] c 05 N70-41297  
Recovery of potable water from human wastes in below-G conditions Patent  
[NASA-CASE-XLA-03213] c 05 N71-11207  
Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c 15 N71-15968  
Reduced gravity simulator Patent  
[NASA-CASE-XLA-01787] c 11 N71-16028  
Method and apparatus of simulating zero gravity conditions Patent  
[NASA-CASE-MFS-12750] c 27 N71-16223  
Quick disconnect latch and handle combination Patent  
[NASA-CASE-MFS-11132] c 15 N71-17649  
Spherical tank gauge Patent  
[NASA-CASE-XMS-06236] c 14 N71-21007  
Zero gravity apparatus Patent  
[NASA-CASE-XMF-06515] c 14 N71-23227  
Skeletal stressing method and apparatus Patent  
[NASA-CASE-ARC-10100-1] c 05 N71-24738

- Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036  
Method of making foamed materials in zero gravity  
[NASA-CASE-XMF-09902] c 15 N72-11387  
Remote control manipulator for zero gravity environment  
[NASA-CASE-MFS-14405] c 15 N72-28495  
Zero gravity liquid mixer  
[NASA-CASE-LAR-10195-1] c 15 N73-19458  
Zero gravity liquid transfer screen  
[NASA-CASE-KSC-10626] c 14 N73-27378  
Reduced gravity fecal collector seat and urinal  
[NASA-CASE-MFS-22102-1] c 54 N74-20725  
Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744  
Rotary plant growth accelerating apparatus --- weightlessness  
[NASA-CASE-ARC-10722-1] c 51 N75-25503  
Fluid control apparatus and method  
[NASA-CASE-LAR-11110-1] c 34 N75-26282  
Method for manufacturing mirrors in zero gravity environment  
[NASA-CASE-MSC-12611-1] c 12 N76-15189  
Fluid mass sensor for a zero gravity environment  
[NASA-CASE-MSC-14653-1] c 35 N77-19385  
Method of crystallization --- in gravity-free environments  
[NASA-CASE-MFS-23001-1] c 76 N77-32919  
Passive propellant system  
[NASA-CASE-MFS-23642-1] c 20 N80-10278  
Method and apparatus for producing concentric hollow spheres --- inertial confinement fusion targets  
[NASA-CASE-NPO-14596-1] c 31 N81-33319

## WEIGHTLESSNESS SIMULATION

- Reduced gravity liquid configuration simulator  
[NASA-CASE-XLE-02624] c 12 N69-39988  
Mass measuring system Patent  
[NASA-CASE-XMS-03371] c 05 N70-42000  
Harness assembly Patent  
[NASA-CASE-MFS-14671] c 05 N71-12341  
Whole body measurement systems --- for weightlessness simulation  
[NASA-CASE-MSC-13972-1] c 52 N74-10975

## WELD STRENGTH

- Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c 37 N75-19683

## WELD TESTS

- Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c 15 N71-18613  
Method and apparatus for swept-frequency impedance measurements of welds  
[NASA-CASE-ARC-10176-1] c 15 N72-21464

## WELDED JOINTS

- Apparatus for welding blades to rotors  
[NASA-CASE-LEW-10533-2] c 37 N74-11300  
Ultrasonic scanning system for in-place inspection of brazed tube joints  
[NASA-CASE-MFS-20767-1] c 38 N74-15130  
Device for measuring the ferrite content in an austenitic stainless-steel weld  
[NASA-CASE-MFS-22907-1] c 26 N76-18257  
Capillary flow weld-bonding  
[NASA-CASE-LAR-11726-1] c 37 N76-27568  
Automated weld torch guidance control system  
[NASA-CASE-MFS-25807-2] c 37 N86-21850

## WELDED STRUCTURES

- Grain refinement control in TIG arc welding  
[NASA-CASE-MSC-19095-1] c 37 N75-19683  
Flanged major modular assembly jig  
[NASA-CASE-MSC-19372-1] c 39 N76-31562  
Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397  
Bimetallic junctions  
[NASA-CASE-LEW-11573-1] c 26 N77-28265

## WELDING

- Segmented back-up bar Patent  
[NASA-CASE-XMF-00640] c 15 N70-39924  
Flexible back-up bar Patent  
[NASA-CASE-XMF-00722] c 15 N70-40204  
Apparatus for welding sheet material --- butt joints  
[NASA-CASE-XMS-01330] c 37 N75-27376  
Weld-bonded titanium structures  
[NASA-CASE-LAR-11549-1] c 37 N77-11397  
Method and apparatus for holding two separate metal pieces together for welding  
[NASA-CASE-GSC-12318-1] c 37 N80-23655  
Automatic weld torch guidance control system  
[NASA-CASE-MFS-25807] c 37 N83-20154  
Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338  
Alignment and assembly tool for very large diameter cylinders  
[NASA-CASE-MFS-28001-1] c 37 N85-29289  
Method of repairing hidden leaks in tubes  
[NASA-CASE-MFS-19796-1] c 37 N86-32736



**WELDING MACHINES**

- Apparatus for welding torch angle and seam tracking control Patent  
[NASA-CASE-XMF-03287] c 15 N71-15607
- Automatic welding speed controller Patent  
[NASA-CASE-XMF-01730] c 15 N71-23050
- Electric welding torch Patent  
[NASA-CASE-XMF-02330] c 15 N71-23798
- Welding skate with computerized control Patent  
[NASA-CASE-XMF-07069] c 15 N71-23815
- Computerized system for translating a torch head  
[NASA-CASE-MFS-23620-1] c 37 N79-10421
- Welding torch arc light reflector  
[NASA-CASE-MFS-29134-1] c 74 N86-20130

**WET CELLS**

- Method and device for determining battery state of charge Patent  
[NASA-CASE-NPO-10194] c 03 N71-20407

**WETTING**

- Pretreatment method for anti-wettable materials  
[NASA-CASE-XMS-03537] c 15 N89-21471

**WHEATSTONE BRIDGES**

- Self-balancing strain gage transducer Patent  
[NASA-CASE-MFS-12827] c 14 N71-17656
- Method for improving the signal-to-noise ratio of the Wheatstone bridge type bolometer Patent  
[NASA-CASE-XLA-02810] c 14 N71-25901
- Temperature control system with a pulse width modulated bridge  
[NASA-CASE-NPO-11304] c 14 N73-26430
- Instrumentation for sensing moisture content of material using a transient thermal pulse  
[NAS 1.71:NPO-15494-2] c 35 N85-34373

**WHEELS**

- Non-backdrivable free wheeling coupling  
[NASA-CASE-MSC-20475-1] c 37 N85-29290

**WHISKER COMPOSITES**

- Reinforced metallic composites Patent  
[NASA-CASE-XLE-00228] c 17 N70-38490

**WHISKERS (CRYSTALS)**

- Catalyst for growth of boron carbide single crystal whiskers  
[NASA-CASE-XHQ-03903] c 15 N69-21922

**WICKS**

- Method of forming a wick for a heat pipe  
[NASA-CASE-NPO-13391-1] c 34 N76-27515
- Monogroove heat pipe design: Insulated liquid channel with bridging wick  
[NASA-CASE-MSC-20497-1] c 34 N85-29180

**WIDE ANGLE LENSES**

- Wide angle long eye relief eyepiece Patent  
[NASA-CASE-XMS-06056-1] c 23 N71-24857

**WIDEBAND COMMUNICATION**

- Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346
- Multiple band circularly polarized microstrip antenna  
[NASA-CASE-MSC-18334-1] c 32 N80-32604

**WINCHES**

- Winch having cable position and load indicators Patent  
[NASA-CASE-MSC-12052-1] c 15 N71-24599

**WIND DIRECTION**

- Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292

**WIND EFFECTS**

- Viscous pendulum damper Patent  
[NASA-CASE-LAR-10274-1] c 14 N71-17626
- Aircraft liftemer  
[NASA-CASE-LAR-12518-1] c 06 N86-27280

**WIND MEASUREMENT**

- Passive optical wind and turbulence detection system Patent  
[NASA-CASE-XMF-14032] c 20 N71-16340
- Maxometers (peak wind speed anemometers)  
[NASA-CASE-MFS-20916] c 14 N73-25460
- Wind sensor  
[NASA-CASE-NPO-13462-1] c 35 N76-24524
- Focused laser Doppler velocimeter  
[NASA-CASE-MFS-23178-1] c 35 N77-10493
- Wind measurement system  
[NASA-CASE-MFS-23362-1] c 47 N77-10753

**WIND PROFILES**

- Wind velocity probing device and method Patent  
[NASA-CASE-XLA-02081] c 20 N71-16281

**WIND SHEAR**

- CAT altitude avoidance system  
[NASA-CASE-NPO-15351-1] c 06 N83-10040
- Aircraft liftemer  
[NASA-CASE-LAR-12518-1] c 06 N86-27280

**WIND TUNNEL APPARATUS**

- Wind tunnel airstream oscillating apparatus Patent  
[NASA-CASE-XLA-00112] c 11 N70-33287
- Electric arc device for heating gases Patent  
[NASA-CASE-XAC-00319] c 25 N70-41628

**Test unit free-flight suspension system Patent**

- [NASA-CASE-XLA-00939] c 11 N71-15926
- Burst diaphragm flow initiator Patent  
[NASA-CASE-MFS-12915] c 11 N71-17600
- Electric arc apparatus Patent  
[NASA-CASE-XAC-01677] c 09 N71-20816
- Model launcher for wind tunnels Patent  
[NASA-CASE-XNP-03578] c 11 N71-23030
- Wind tunnel microphone structure Patent  
[NASA-CASE-XNP-00250] c 11 N71-28779
- Wind tunnel  
[NASA-CASE-LAR-10135-1] c 09 N79-21083
- Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254
- Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1] c 09 N86-31594

**WIND TUNNEL CALIBRATION**

- Rotary target V-block  
[NASA-CASE-LAR-12007-3] c 35 N84-16523

**WIND TUNNEL DRIVES**

- Electric arc driven wind tunnel Patent  
[NASA-CASE-XMF-00411] c 11 N70-36913

**WIND TUNNEL MODELS**

- Flow field simulation Patent  
[NASA-CASE-LAR-11138] c 12 N71-20436
- Multilegged support system Patent  
[NASA-CASE-XLA-01326] c 11 N71-21481
- Model launcher for wind tunnels Patent  
[NASA-CASE-XNP-03578] c 11 N71-23030
- Wind tunnel model damper Patent  
[NASA-CASE-XLA-09480] c 11 N71-33612
- Wind tunnel model and method  
[NASA-CASE-LAR-10812-1] c 09 N74-17955
- Method for determining thermo-physical properties of specimens --- photographic recording of changes in thin film phase-change temperature indicating material in wind tunnel  
[NASA-CASE-LAR-11053-1] c 25 N74-18551
- Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254
- Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12458-1] c 44 N83-21503
- Aeroelastic instability stoppers for wind tunnel models  
[NASA-CASE-LAR-12720-1] c 44 N83-21504
- Model mount system for testing flutter  
[NASA-CASE-LAR-12950-1] c 09 N84-34448
- Airfoil flutter model suspension system  
[NASA-CASE-LAR-13522-1] c 09 N86-31594

**WIND TUNNEL NOZZLES**

- Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c 09 N78-31129
- Wind tunnel supplementary Mach number minimum section insert  
[NASA-CASE-LAR-12532-1] c 09 N82-11088

**WIND TUNNEL TESTS**

- Metallic hot wire anemometer --- for high speed wind tunnel tests  
[NASA-CASE-ARC-10911-1] c 35 N77-20400
- Multi-purpose wind tunnel reaction control model block  
[NASA-CASE-MSC-19706-1] c 09 N78-31129
- Metric half-span model support system  
[NASA-CASE-LAR-12441-1] c 09 N82-23254

**WIND TUNNEL WALLS**

- Sound shield  
[NASA-CASE-LAR-12883-1] c 71 N83-17235

**WIND TUNNELS**

- Thin film gauge --- for measuring convective heat transfer rates along test surfaces in wind tunnels  
[NASA-CASE-NPO-10617-1] c 35 N74-22095
- Wind tunnel flow generation section  
[NASA-CASE-ARC-10710-1] c 09 N75-12969
- Apparatus for reducing aerodynamic noise in a wind tunnel  
[NASA-CASE-MFS-23099-1] c 09 N76-23273
- Static pressure orifice system testing method and apparatus  
[NASA-CASE-LAR-12268-1] c 35 N80-18358

**WIND TURBINES**

- Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639
- Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018

**WIND VELOCITY**

- Radionuclide counting technique for measuring wind velocity and direction  
[NASA-CASE-LAR-12971-1] c 47 N84-28292
- Aircraft liftemer  
[NASA-CASE-LAR-12518-1] c 06 N86-27280

**WIND VELOCITY MEASUREMENT**

- Wind velocity probing device and method Patent  
[NASA-CASE-XLA-02081] c 20 N71-16281
- Aircraft liftemer  
[NASA-CASE-LAR-12518-1] c 06 N86-27280

**WINDING**

- Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475
- Pulse coupling circuit  
[NASA-CASE-LEW-10433-1] c 09 N72-22197

**WINDMILLS (WINDPOWERED MACHINES)**

- Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280
- Vertical shaft windmill  
[NASA-CASE-LAR-12923-1] c 37 N84-12493
- Coupling an induction motor type generator to ac power lines --- making windmill generators compatible with public power lines  
[NASA-CASE-MFS-25302-2] c 33 N84-33660

**WINDOWS (APERTURES)**

- Active microwave irises and windows  
[NASA-CASE-LAR-10513-1] c 07 N72-25170
- Observation window for a gas confining chamber  
[NASA-CASE-NPO-10890] c 11 N73-12265
- Double window viewing chamber assembly  
[NASA-CASE-MFS-28057-1] c 09 N85-28951
- Light transmitting window assembly  
[NASA-CASE-MSC-18417-1] c 74 N85-29750

**WINDPOWER UTILIZATION**

- Amplified wind turbine apparatus  
[NASA-CASE-MFS-23830-1] c 44 N82-24639
- Wind and solar powered turbine  
[NASA-CASE-NPO-15496-1] c 44 N84-23018

**WINDPOWERED GENERATORS**

- Wind wheel electric power generator  
[NASA-CASE-MFS-23515-1] c 44 N80-21828
- Electrical power generating system --- for windpowered generation  
[NASA-CASE-MFS-24368-3] c 33 N81-22280

**WINDSHIELDS**

- Transparent fire resistant polymeric structures  
[NASA-CASE-ARC-10813-1] c 27 N76-16230

**WING CAMBER**

- Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551

**WING FLAPS**

- Jet aircraft configuration Patent  
[NASA-CASE-XLA-00087] c 02 N70-33332

**Slotted variable camber flap**

- [NASA-CASE-LAR-12541-1] c 05 N84-22551

**WING PROFILES**

- Variable-span aircraft Patent  
[NASA-CASE-XLA-00166] c 02 N70-34178
- Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277

**WING ROOTS**

- Solar powered aircraft  
[NASA-CASE-LAR-12615-1] c 05 N84-12154

**WING SLOTS**

- Slotted variable camber flap  
[NASA-CASE-LAR-12541-1] c 05 N84-22551

**WING TIP VORTICES**

- Wingtip vortex dissipator for aircraft  
[NASA-CASE-LAR-11645-1] c 02 N77-10001

**WING TIPS**

- Smoke generator  
[NASA-CASE-ARC-10905-1] c 37 N77-13418
- Wingtip vortex turbine  
[NASA-CASE-LAR-12544-1] c 07 N81-27096
- Wingtip vortex propeller  
[NASA-CASE-LAR-13019-1] c 07 N85-35194

**WINGS**

- Ferry system  
[NASA-CASE-LAR-10574-1] c 11 N73-13257
- Surface finishing --- for aircraft wings  
[NASA-CASE-MSC-12631-1] c 24 N77-28225
- Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061
- Detection of the transitional layer between laminar and turbulent flow areas on a wing surface --- using an accelerometer to measure pressure levels during wind tunnel tests  
[NASA-CASE-LAR-12261-1] c 02 N80-20224
- System for use in conducting wake investigation for a wing in flight --- differential pressure measurements for drag investigations  
[NASA-CASE-FRC-11024-1] c 02 N80-28300
- Means for controlling aerodynamically induced twist  
[NASA-CASE-LAR-12175-1] c 05 N82-28279
- Decoupler pylon: wing/store flutter suppressor  
[NASA-CASE-LAR-12468-1] c 08 N82-32373
- Remote pivot decoupler pylon: Wing/store suppression  
[NASA-CASE-LAR-13173-1] c 05 N85-19981
- Piezoelectric deicing device  
[NASA-CASE-LEW-13773-2] c 33 N86-20671

## WIRE

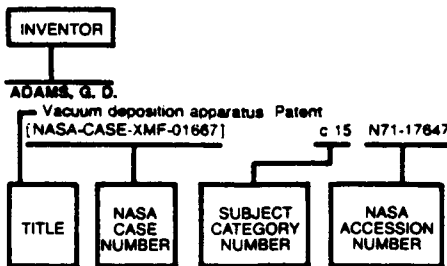
- Transpiration cooled turbine blade manufactured from wires Patent  
[NASA-CASE-XLE-00020] c 15 N70-33226
- Soldering device Patent  
[NASA-CASE-XLA-08911] c 15 N71-27214
- Forming tool for ribbon or wire  
[NASA-CASE-XLA-05966] c 15 N72-12408
- Method of removing insulated material from insulated wires  
[NASA-CASE-FRC-10038] c 15 N72-20444
- Shielded flat cable  
[NASA-CASE-MFS-13687-2] c 09 N72-22198
- Butt welder for fine gauge tungsten/rhenium thermocouple wire  
[NASA-CASE-LAR-10103-1] c 15 N73-14468
- Method of fabricating a twisted composite superconductor  
[NASA-CASE-LEW-11015] c 26 N73-32571
- Joining lead wires to thin platinum alloy films  
[NASA-CASE-LEW-13934-1] c 35 N83-35338
- Apparatus for disintegrating kidney stones  
[NASA-CASE-GSC-12652-1] c 52 N84-34913
- WIRE BRIDGE CIRCUITS**  
Cavity radiometer Patent  
[NASA-CASE-XNP-08961] c 14 N71-24809
- WIRE CLOTH**  
Insulating structure Patent  
[NASA-CASE-XMF-00341] c 15 N70-33323
- Method of making screen by casting Patent  
[NASA-CASE-XLE-00953] c 15 N71-15966
- WIRE WINDING**  
Adjustable tension wire guide Patent  
[NASA-CASE-XMS-02383] c 15 N71-15918
- Superconducting alternator Patent  
[NASA-CASE-XLE-02823] c 09 N71-23443
- Electric motive machine including magnetic bearing  
[NASA-CASE-XGS-07805] c 15 N72-33476
- Laser measuring system for incremental assemblies --- measuring wire-wrapped frame assemblies in spark chambers  
[NASA-CASE-GSC-12321-1] c 36 N82-16396
- WIRELESS COMMUNICATION**  
Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205
- RF beam center location method and apparatus for power transmission system  
[NASA-CASE-NPO-13821-1] c 44 N78-28594
- WIRING**  
Apparatus for testing wiring harness by vibration generating means  
[NASA-CASE-MSC-15158-1] c 14 N72-17325
- Test apparatus for locating shorts during assembly of electrical buses  
[NASA-CASE-ARC-11116-1] c 33 N82-24420
- Phase sensitive guidance sensor for wire-following vehicles  
[NASA-CASE-NPO-15341-1] c 35 N84-33769
- WOODEN STRUCTURES**  
Structural wood panels with improved fire resistance  
[NASA-CASE-ARC-11174-1] c 24 N81-13999
- WORDS (LANGUAGE)**  
Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917
- Parallel generation of the check bits of a PN sequence Patent  
[NASA-CASE-XNP-04623] c 10 N71-26103
- Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-XNP-01466] c 10 N71-26434
- WORK HARDENING**  
Method of producing complex aluminum alloy parts of high temper, and products thereof  
[NASA-CASE-MSC-19693-1] c 26 N78-24333
- WORKING FLUIDS**  
Heat pipe with dual working fluids  
[NASA-CASE-ARC-10198] c 34 N78-17336
- Thermochemical generation of hydrogen  
[NASA-CASE-NPO-15015-1] c 25 N82-28368
- Heat pipes containing alkali metal working fluid  
[NASA-CASE-LEW-12253-1] c 74 N83-19596
- WORKSTATIONS**  
Reconfigurable work station for a video display unit and keyboard  
[NASA-CASE-MFS-26009-1SB] c 54 N86-22114
- WRENCHES**  
Methods and apparatus employing vibratory energy for wrenching Patent  
[NASA-CASE-MFS-20586] c 15 N71-17686
- System for enhancing tool-exchange capabilities of a portable wrench  
[NASA-CASE-MFS-22283-1] c 37 N75-33395
- Zero torque gear head wrench  
[NASA-CASE-NPO-13059-1] c 37 N76-20480

- High-torque open-end wrench  
[NASA-CASE-NPO-13541-1] c 37 N79-14383
- WRIST**  
Wrist joint assembly  
[NASA-CASE-MFS-23311-1] c 54 N78-17676
- X**
- X RAY ABSORPTION**  
Medical clip  
[NASA-CASE-LAR-12650-1] c 52 N84-28388
- X RAY APPARATUS**  
Device and method for determining X ray reflection efficiency of optical surfaces  
[NASA-CASE-MFS-20243] c 23 N73-13662
- X-ray position detector  
[NASA-CASE-NPO-12087-1] c 74 N81-19898
- X RAY DIFFRACTION**  
Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950
- X RAY IMAGERY**  
Low intensity X-ray and gamma-ray imaging device --- fiber optics  
[NASA-CASE-GSC-12263-1] c 74 N79-20857
- Real-time 3-D X-ray and gamma-ray viewer  
[NASA-CASE-GSC-12640-1] c 74 N84-11920
- Method of fabricating an imaging X-ray spectrometer  
[NASA-CASE-GSC-12956-1] c 35 N86-20754
- X RAY INSPECTION**  
Method of determining bond quality of power transistors attached to substrates --- X ray inspection of junction microstructure  
[NASA-CASE-MFS-21931-1] c 37 N75-26372
- Apparatus for use in examining the lattice of a semiconductor wafer by X-ray diffraction  
[NASA-CASE-MFS-23315-1] c 76 N78-24950
- X-ray determination of parts alignment  
[NASA-CASE-MSC-20418-1] c 74 N86-20126
- X RAY IRRADIATION**  
Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent  
[NASA-CASE-XMS-02930] c 11 N71-23042
- X RAY SOURCES**  
Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765
- X RAY SPECTROSCOPY**  
Low intensity X-ray and gamma-ray spectrometer  
[NASA-CASE-GSC-12587-1] c 35 N82-32659
- Imaging X-ray spectrometer  
[NASA-CASE-GSC-12682-1] c 35 N84-33765
- Method of fabricating an imaging X-ray spectrometer  
[NASA-CASE-GSC-12956-1] c 35 N86-20754
- X RAY TELESCOPES**  
X-ray reflection collimator adapted to focus X-radiation directly on a detector Patent  
[NASA-CASE-XHQ-04106] c 14 N70-40240
- Three mirror glancing incidence system for X-ray telescope  
[NASA-CASE-MFS-21372-1] c 74 N74-27866
- Method of and means for testing a glancing-incidence mirror system of an X-ray telescope  
[NASA-CASE-MFS-22409-2] c 74 N78-15880
- Extended range X-ray telescope  
[NASA-CASE-MFS-25282-1] c 34 N83-19015
- Spectral slicing X-ray telescope with variable magnification  
[NASA-CASE-MFS-25942-1] c 74 N86-20124
- Multispectral glancing incidence X-ray telescope  
[NASA-CASE-MFS-28013-1] c 89 N86-22459
- X RAYS**  
Support structure for irradiated elements Patent  
[NASA-CASE-XNP-08031] c 15 N71-15606
- Selective image area control of X-ray film exposure density  
[NASA-CASE-NPO-13808-1] c 35 N78-15461
- Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects  
[NASA-CASE-GSC-12851-1] c 35 N85-30281
- X-Y PLOTTERS**  
Contour surveying system Patent  
[NASA-CASE-XLA-08646] c 14 N71-17586
- Particle parameter analyzing system --- x-y plotter circuits and display  
[NASA-CASE-XLE-06094] c 33 N78-17293
- X-15 AIRCRAFT**  
Energy management system for glider type vehicle Patent  
[NASA-CASE-XFR-00756] c 02 N71-13421
- XENON**  
Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N85-30779

- Double photon excitation of high-Rydberg atoms as a long-lived submillimeter detector  
[NASA-CASE-NPO-16372-1] c 72 N86-33127
- XENON LAMPS**  
Optical pump and driver system for lasers  
[NASA-CASE-ERC-10283] c 16 N72-25485
- Purging means and method for Xenon arc lamps  
[NASA-CASE-NPO-11978] c 31 N78-17238
- Multiple anode arc lamp system  
[NASA-CASE-NPO-10857-1] c 33 N80-14330
- Y**
- YAG LASERS**  
Dually mode locked Nd:YAG laser  
[NASA-CASE-GSC-11746-1] c 36 N75-19654
- Length controlled stabilized mode-lock Nd:YAG laser  
[NASA-CASE-GSC-11571-1] c 36 N77-25499
- YARNS**  
Flexible pile thermal barrier insulator  
[NASA-CASE-MSC-19568-1] c 34 N78-25350
- Lightweight electrically-powered flexible thermal laminate --- made of metal and nonconductive yarns  
[NASA-CASE-MSC-12662-1] c 33 N79-12331
- YAW**  
Three-axis controller Patent  
[NASA-CASE-XAC-01404] c 05 N70-41581
- Thrust augmented spin recovery device  
[NASA-CASE-LAR-11970-2] c 08 N81-19130
- YIELD STRENGTH**  
High toughness-high strength iron alloy  
[NASA-CASE-LEW-12542-3] c 26 N80-32484
- YO-YO DEVICES**  
Stretch de-spin mechanism Patent  
[NASA-CASE-XGS-00619] c 30 N70-40016
- YOKES**  
Preloadable vector sensitive latch  
[NASA-CASE-MSC-20910-1] c 37 N86-19613
- YTTERBIUM**  
Thermal barrier coating system  
[NASA-CASE-LEW-14057-1] c 24 N85-35233
- Z**
- ZEOLITES**  
Filter system for control of outgas contamination in vacuum Patent  
[NASA-CASE-MFS-14711] c 15 N71-26185
- ZINC**  
Potassium silicate zinc coatings  
[NASA-CASE-GSC-10361-1] c 18 N72-23581
- Rechargeable battery which combats shape change of the zinc anode  
[NASA-CASE-HON-10862-1] c 44 N76-29699
- ZINC COMPOUNDS**  
Method of changing the conductivity of vapor deposited gallium arsenide by the introduction of water into the vapor deposition atmosphere Patent  
[NASA-CASE-XNP-01961] c 26 N71-29156
- Synthesis of zinc titanate pigment and coatings containing the same  
[NASA-CASE-MFS-13532] c 18 N72-17532
- Brazing alloy  
[NASA-CASE-XNP-03878] c 26 N75-27127
- Zinc-halide battery with molten electrolyte  
[NASA-CASE-NPO-11961-1] c 44 N76-18643
- Method of preparing zinc orthotitanate pigment  
[NASA-CASE-MFS-23345-1] c 27 N77-30237
- ZINC OXIDES**  
Stabilized zinc oxide coating compositions Patent  
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- Method of forming transparent films of ZnO  
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**RIEKER, L. L.**

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- Absorbable-susceptor joining of ceramic surfaces  
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**SHLICHTA, P. J.**

- Glass heating panels and method for preparing the same from architectural reflective glass  
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- Method for growth of crystals by pressure reduction of supercritical or subcritical solution  
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**SHLOSINGER, A. P.**

- Method of making macrocrystalline or single crystal semiconductor material  
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**SHLOSINGER, A. P.**

- Heat pipe with dual working fluids  
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**SHLOSINGER, A. P.**

- Multi-chamber controllable heat pipe  
[NASA-CASE-ARC-10199] c 34 N78-17337

**SHORES, P. W.**

- Position determination systems  
[NASA-CASE-MSC-12593-1] c 17 N76-21250

**SHORES, P. W.**

- Doppler radar having phase modulation of both transmitted and reflected return signals  
[NASA-CASE-MSC-18675-1] c 32 N84-22820

**SHORES, P. W.**

- Method and apparatus for measuring distance  
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**SHORTTRIDGE, S. R.**

- Switching circuit employing regeneratively connected complementary transistors Patent  
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**SHRIVER, C. B.**

- Method of making a filament-wound container Patent  
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**SHRIVER, C. B.**

- Filament wound container Patent  
[NASA-CASE-XLE-03803] c 15 N71-23816

**SHRIVER, C. B.**

- Panelized high performance multilayer insulation Patent  
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**SHRIVER, C. L.**

- Multichannel logarithmic RF level detector  
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**SHRIVER, E. L.**

- Apparatus for determining the deflection of an electron beam impinging on a target Patent  
[NASA-CASE-XMF-06617] c 09 N71-24843

**SHRIVER, E. L.**

- Shock wave convergence apparatus  
[NASA-CASE-MFS-20890] c 14 N72-22439

**SHRIVER, E. L.**

- Self-energized plasma compressor  
[NASA-CASE-MFS-22145-1] c 75 N75-13625

**SHRIVER, E. L.**

- Two stage light gas-plasma projectile accelerator  
[NASA-CASE-MFS-22287-1] c 75 N76-14931

**SHRIVER, E. L.**

- Self-energized plasma compressor  
[NASA-CASE-MFS-22145-2] c 75 N76-17951

**SHRIVER, E. L.**

- Semiconductor projectile impact detector  
[NASA-CASE-MFS-23008-1] c 35 N78-18390

**SHROCK, C. G.**

- Determination of antimicrobial susceptibilities on infected unnes without isolation  
[NASA-CASE-GSC-12046-1] c 52 N79-14750

**SHUBE, E. E.**

- Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984

**SHULL, T. A.**

- Digital demodulator  
[NASA-CASE-LAR-12659-1] c 33 N82-26570

**SHULMAN, A. R.**

- Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence  
[NASA-CASE-GSC-11133-1] c 23 N72-11568

**SHULMAN, A. R.**

- Method and apparatus for producing an image from a transparent object  
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**SHUMATE, M. S.**

- Method and apparatus for aligning a laser beam projector Patent  
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**SHUMATE, M. S.**

- Differential optoacoustic absorption detector  
[NASA-CASE-NPO-13759-1] c 74 N78-17867

**SHUMATE, M. S.**

- Method and apparatus for Doppler frequency modulation of radiation  
[NASA-CASE-NPO-14143-1] c 25 N81-14015

**SHUMKA, A.**

- Space-charge-limited solid-state triode  
[NASA-CASE-NPO-13064-1] c 33 N79-11314

**SHUMKA, A.**

- Synchronized voltage contrast display analysis system  
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**SHURE, L. I.**

- Protected isotope heat source  
[NASA-CASE-LEW-11227-1] c 73 N75-30876

**SHUTE, D. I.**

- Reference apparatus for medical ultrasonic transducer  
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**SIDMAN, K. R.**

- Non-flammable elastomeric fiber from a fluorinated elastomer and containing an halogenated flame retardant  
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**SIDMAN, K. R.**

- Flame retardant spandex type polyurethanes  
[NASA-CASE-MSC-14331-2] c 27 N78-17213

- Process for spinning flame retardant elastomeric compositions  
[NASA-CASE-MSC-14331-3] c 27 N78-32262
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- Heat sealable, flame and abrasion resistant coated fabric  
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Solar cell shingle  
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- Subminiature insertable force transducer  
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- Strain gage mounting assembly  
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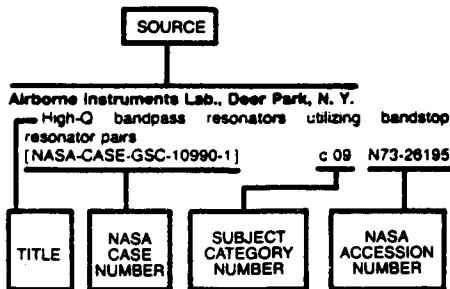
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- Signal path series step biased multidevice high efficiency amplifier Patent  
[NASA-CASE-GSC-10668-1] c 07 N71-28430
- Heat conductive resiliently compressible structure for space electronics package modules Patent  
[NASA-CASE-MSC-12389] c 33 N71-29052
- Infinite range electronics gain control circuit  
[NASA-CASE-GSC-10786-1] c 10 N72-28241

**Colorado State Univ., Fort Collins.**

- Apparatus for extraction and separation of a preferentially photo-dissociated molecular isotope into positive and negative ions by means of an electric field  
[NASA-CASE-LEW-12465-1] c 25 N78-25148
- Columbia Univ., New York.

- Acoustic guide for noise transmission testing of aircraft  
[NASA-CASE-LAR-13111-1-CU] c 71 N86-20086

**Comprehensive Designers, Inc., Sherman Oaks, Calif.**

- Vehicle for use in planetary exploration  
[NASA-CASE-NPO-11366] c 11 N73-26238

**Computer Control Co., Inc., Framingham, Mass.**

- Test fixture for pellet-like electrical elements  
[NASA-CASE-XNP-06032] c 09 N69-21926

- Support structure for irradiated elements Patent  
[NASA-CASE-XNP-06031] c 15 N71-15806

- Counter Patent  
[NASA-CASE-XNP-06234] c 10 N71-27137

**Computer Sciences Corp., Falls Church, Va.**

- Oceanic wave measurement system  
[NASA-CASE-MFS-23862-1] c 48 N80-18667

**Computer Sciences Corp., Greenbelt, Md.**

- Method and apparatus for mapping the distribution of chemical elements in an extended medium  
[NASA-CASE-GSC-12808-1] c 25 N85-21279

**Computer Sciences Corp., Mountain View, Calif.**

- Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288

**Conrac Corp., Pasadena, Calif.**

- Penetrating radiation system for detecting the amount of liquid in a tank Patent  
[NASA-CASE-MSC-12280] c 27 N71-16348

**Consolidated Controls Corp., El Segundo, Calif.**

- Low temperature latching solenoid  
[NASA-CASE-MSC-18106-1] c 33 N82-11357

**Cornell Univ., Ithaca, N.Y.**

- Flux sensing device using a tubular core with toroidal gating coil and solenoidal output coil wound thereon Patent  
[NASA-CASE-XGS-01881] c 09 N70-40123

**Crane Co., Burbank, Calif.**

- Hydraulic transformer Patent  
[NASA-CASE-MFS-20830] c 15 N71-30028

**Curtiss-Wright Corp., Wood-Ridge, N.J.**

- Gas turbine combustion apparatus Patent  
[NASA-CASE-XLE-103477-1] c 28 N71-20330

**Cutler-Hammer, Inc., Melville, N.Y.**

- Wideband heterodyne receiver for laser communication system  
[NASA-CASE-GSC-12053-1] c 32 N77-28346

**D****Delaware Univ., Newark.**

- High field CdS detector for infrared radiation  
[NASA-CASE-LAR-11027-1] c 35 N74-18088

**Denver Univ., Colo.**

- Metal shearing energy absorber  
[NASA-CASE-HQN-10638-1] c 15 N73-30480

**Department of Transportation, Cambridge, Mass.**

- Optical noise suppression device and method  
[NASA-CASE-MSC-12640-1] c 74 N78-31998

**Dorne and Margolin, Inc., Bohemia, N.Y.**

- Nose cone mounted heat resistant antenna Patent  
[NASA-CASE-XMS-04312] c 07 N71-22984

**Douglas Aircraft Co., Inc., Santa Monica, Calif.**

- Recoverable single stage spacecraft booster Patent  
[NASA-CASE-XMF-01973] c 31 N70-41588

- Switching circuit employing regeneratively connected complementary transistors Patent  
[NASA-CASE-XNP-02654] c 10 N70-42032

- Split nut separation system Patent  
[NASA-CASE-XNP-06914] c 15 N71-21489

- Artificial gravity spin deployment system Patent  
[NASA-CASE-XNP-02595] c 31 N71-21881

- Portable superclean air column device Patent  
[NASA-CASE-XMF-03212] c 15 N71-22721

- Energy absorption device Patent  
[NASA-CASE-XNP-01848] c 15 N71-28959

- Collapse pistons  
[NASA-CASE-MSC-13789-1] c 11 N73-32152

**Duke Univ., Durham, N.C.**

- Regulated dc-to-dc converter for voltage step-up or step-down with input-output isolation  
[NASA-CASE-HQN-10792-1] c 33 N74-11049

**Dumont Electron Tubes, Clifton, N. J.**

- High contrast cathode ray tube  
[NASA-CASE-ERC-10468] c 09 N72-20206

**Dynatherm Corp., Cockeysville, Md.**

- Heat pipe thermal switch  
[NASA-CASE-GSC-12812-1] c 34 N83-35307

**E****Echo Science Corp., Mountain View, Calif.**

- Dynamic capacitor having a peripherally driven element and system incorporating the same  
[NASA-CASE-XNP-02899-1] c 33 N79-21265

**Eitel-McCullough, Inc., San Carlos, Calif.**

- Method of forming ceramic to metal seal Patent  
[NASA-CASE-XNP-01263-2] c 15 N71-26312

**Electrac, Inc., Anaheim, Calif.**

- Optimum predetection diversity receiving system Patent  
[NASA-CASE-XGS-00740] c 07 N71-23098

**Electric Storage Battery Co., Raleigh, N.C.**

- Electric battery and method for operating same Patent  
[NASA-CASE-XGS-01674] c 03 N71-29129

- Storage battery comprising negative plates of a wedge shaped configuration  
[NASA-CASE-NPO-11806-1] c 44 N74-19693

**Electric Storage Battery Co., Yardley, Pa.**

- Electric storage battery  
[NASA-CASE-NPO-11021] c 03 N72-20032

**Electro-Optical Systems, Inc., Pasadena, Calif.**

- Focusing system for an ion source having apertured electrodes Patent  
[NASA-CASE-XNP-03332] c 09 N71-10618

- Electrolytically regenerative hydrogen-oxygen fuel cell Patent  
[NASA-CASE-XLE-04526] c 03 N71-11052

- Method of producing refractory bodies having controlled porosity Patent  
[NASA-CASE-LEW-10393-1] c 17 N71-15468

- Soil particles separator, collector and viewer Patent  
[NASA-CASE-XNP-09770] c 15 N71-20440

- Particle detection apparatus including a ballistic pendulum Patent  
[NASA-CASE-XMS-04201] c 14 N71-22990

- Polarity sensitive circuit Patent  
[NASA-CASE-XNP-00952] c 10 N71-23271

- Ion engine casing construction and method of making same Patent  
[NASA-CASE-XNP-06942] c 26 N71-23293

- Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036

- Screen particle separator  
[NASA-CASE-XNP-09770-2] c 15 N72-22483

**Electro-Optics Consultants, Inc., Huntsville, Ala.**

- Photorefractor ocular screening system  
[NASA-CASE-MFS-26011-1SB] c 52 N85-20639

**Electronic Image Systems Corp., Cambridge, Mass.**

- Drying apparatus for photographic sheet material  
[NASA-CASE-GSC-11074-1] c 14 N73-28489

**Essex Corp., Huntsville, Ala.**

- Satellite retrieval system  
[NASA-CASE-MFS-25403-1] c 18 N83-29303

**Ewen Knight Corp., East Natick, Mass.**

- Method and means for providing an absolute power measurement capability Patent  
[NASA-CASE-ERC-11020] c 14 N71-26774

**F****Fairchild Hiller Corp., Germantown, Md.**

- Two axis fluxgate magnetometer Patent  
[NASA-CASE-GSC-10441-1] c 14 N71-27325

- Space simulation and radiative property testing system and method Patent  
[NASA-CASE-MFS-20096] c 14 N71-30026

- Thermal control system for a spacecraft modular housing  
[NASA-CASE-GSC-11018-1] c 31 N73-30829

**Fairchild Republic Co., Farmingdale, N.Y.**

- Surface conforming thermal/pressure seal  
[NASA-CASE-MSC-18422-1] c 37 N82-16408

**Faraday Labs, Inc., La Jolla, Calif.**

- Method for attaching a fused-quartz mirror to a conductive metal substrate  
[NASA-CASE-MFS-23405-1] c 26 N77-29260

**Federal-Mogul Corp., Los Alamitos, Calif.**

- Hydraulic casting of liquid polymers Patent  
[NASA-CASE-XNP-07659] c 06 N71-22975

**Florida Univ., Gainesville.**

- Safety flywheel  
[NASA-CASE-HQN-10888-1] c 44 N79-14527

**FMC Corp., New York.**

- Decomposition unit Patent  
[NASA-CASE-XMS-00583] c 28 N70-38504

**Foothill Coll., Los Altos Hills, Calif.**

- Electrical conductivity cell and method for fabricating the same  
[NASA-CASE-ARC-10810-1] c 33 N78-18339

**Ford Motor Co., Dearborn, Mich.**

- Omnidirectional acceleration device Patent  
[NASA-CASE-HQN-10780] c 14 N71-30265

**G****Garrett Corp., Los Angeles, Calif.**

- Relief valve  
[NASA-CASE-XMS-05894-1] c 15 N69-21924

- Portable environmental control system Patent  
[NASA-CASE-XMS-06832-1] c 05 N71-11203

- Dual latching solenoid valve Patent  
[NASA-CASE-XMS-05890] c 09 N71-23191

- Water management system and an electrolytic cell therefor Patent  
[NASA-CASE-MSC-10860-1] c 03 N71-24718

- Low cycle fatigue testing machine  
[NASA-CASE-LAR-10270-1] c 32 N72-25877

- Process for separation of dissolved hydrogen from water by use of palladium and process for coating palladium with palladium black  
[NASA-CASE-MSC-13335-1] c 06 N72-31140

- Flexible joint for pressurizable garment  
[NASA-CASE-MSC-11072] c 54 N74-32546

- Gas compression apparatus  
[NASA-CASE-MSC-14757-1] c 35 N78-10428

- Wind tunnel  
[NASA-CASE-LAR-10135-1] c 09 N79-21083

- Water separator  
[NASA-CASE-XMS-01295-1] c 37 N79-21345

**Garrett Corp., Torrance, Calif.**

- Adaptive reference voltage generator for firing angle control of line-commutated inverters  
[NASA-CASE-MFS-25215-1] c 33 N83-31953

**GCA Corp., Bedford, Mass.**

- Analytical photoionization mass spectrometer with an argon gas filter between the light source and monochromator Patent  
[NASA-CASE-LAR-10180-1] c 06 N71-13481

**General Dynamics/Astronautics, San Diego, Calif.**

- Determination of spot weld quality Patent  
[NASA-CASE-XNP-02588] c 15 N71-18613

- Pressure transducer calibrator Patent  
[NASA-CASE-XNP-01860] c 14 N71-23036

- Plating nickel on aluminum castings Patent  
[NASA-CASE-XNP-04148] c 17 N71-24830

**General Dynamics/Convair, San Diego, Calif.**

- Signal generator  
[NASA-CASE-XNP-05612] c 09 N69-21468

- Separation nut Patent  
[NASA-CASE-XGS-01971] c 15 N71-15922

- Zero gravity separator Patent  
[NASA-CASE-XLE-00586] c 15 N71-15968

- Catalyst cartridge for carbon dioxide reduction unit  
[NASA-CASE-LAR-10551-1] c 25 N74-12813

- Heat exchanger  
[NASA-CASE-MFS-22991-1] c 34 N77-10463

**General Dynamics Corp., San Diego, Calif.**

- Light radiation direction indicator with a baffle of two parallel grids  
[NASA-CASE-XNP-03930] c 14 N69-24331

- Method and apparatus for attaching physiological monitoring electrodes Patent  
[NASA-CASE-XFR-07658-1] c 05 N71-26293

- Driving lamps by induction  
[NASA-CASE-MFS-21214-1] c 09 N73-30181

**General Electric Co., Cincinnati, Ohio.**

- Dual output variable pitch turbofan actuation system  
[NASA-CASE-LEW-12419-1] c 07 N77-14025

- Reverse pitch fan with divided splitter  
[NASA-CASE-LEW-12760-1] c 07 N77-17059

- Leading edge protection for composite blades  
[NASA-CASE-LEW-12550-1] c 24 N77-19170

- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12830-1] c 07 N77-23106

- Blade retainer assembly  
[NASA-CASE-LEW-12808-1] c 07 N77-27116

- Platform for a swing root turbomachinery blade  
[NASA-CASE-LEW-12312-1] c 07 N77-32148

- Deformable bearing seat  
[NASA-CASE-LEW-12527-1] c 37 N77-32500

- Bearing seat usable in a gas turbine engine  
[NASA-CASE-LEW-12477-1] c 37 N77-32501

- Oil cooling system for a gas turbine engine  
[NASA-CASE-LEW-12321-1] c 37 N78-10487

- Impact absorbing blade mounts for variable pitch blades  
[NASA-CASE-LEW-12313-1] c 37 N78-10468

- Variable thrust nozzle for quiet turbofan engine and method of operating same  
[NASA-CASE-LEW-12317-1] c 07 N78-17055



Gas turbine engine with convertible accessories  
[NASA-CASE-LEW-12390-1] c 07 N78-17056

Variable cycle gas turbine engines  
[NASA-CASE-LEW-12916-1] c 37 N78-17384

Gas turbine engine with recirculating bleed  
[NASA-CASE-LEW-12452-1] c 07 N78-25089

Redundant disc  
[NASA-CASE-LEW-12496-1] c 07 N78-33101

Fuel delivery system including heat exchanger means  
[NASA-CASE-LEW-12793-1] c 37 N79-11403

Integrated gas turbine engine nacelle  
[NASA-CASE-LEW-12389-3] c 07 N79-14096

Variable area exhaust nozzle  
[NASA-CASE-LEW-12378-1] c 07 N79-14097

Sound-suppressing structure with thermal relief  
[NASA-CASE-LEW-12658-1] c 71 N79-14871

Method and apparatus for rapid thrust increases in a turbofan engine  
[NASA-CASE-LEW-12971-1] c 07 N80-18039

Curved centerline air intake for a gas turbine engine  
[NASA-CASE-LEW-13201-1] c 07 N81-14999

Apparatus for sensor failure detection and correction in a gas turbine engine control system  
[NASA-CASE-LEW-12907-2] c 07 N81-19115

Integrated control system for a gas turbine engine  
[NASA-CASE-LEW-12954-2] c 07 N81-19116

Thrust reverser for a long duct fan engine  
[NASA-CASE-LEW-13199-1] c 07 N82-26293

Control means for a gas turbine engine  
[NASA-CASE-LEW-14586-1] c 07 N83-31603

Apparatus for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-1] c 07 N83-36029

Tip cap for a rotor blade  
[NASA-CASE-LEW-13654-1] c 07 N84-22560

Air modulation apparatus  
[NASA-CASE-LEW-13524-1] c 07 N84-33410

Flow modifying device  
[NASA-CASE-LEW-13562-2] c 07 N85-35195

Method for improving the fuel efficiency of a gas turbine engine  
[NASA-CASE-LEW-13142-2] c 07 N86-20389

**General Electric Co., Cleveland, Ohio.**

Variable mixer propulsion cycle  
[NASA-CASE-LEW-12917-1] c 07 N78-18067

**General Electric Co., Philadelphia, Pa.**

Catalyst for growth of boron carbide single crystal whiskers  
[NASA-CASE-XHQ-03903] c 15 N69-21922

Didymium hydrate additive to nickel hydroxide electrodes  
[NASA-CASE-XGS-03505] c 03 N71-10608

Bismuth-lead coatings for gas bearings used in atmospheric environments and vacuum chambers  
[NASA-CASE-XGS-02011] c 15 N71-20739

Automatic control of liquid cooling garment by cutaneous and external auditory meatus temperatures  
[NASA-CASE-MSC-13917-1] c 05 N72-15098

Method for measuring cutaneous sensory perception  
[NASA-CASE-MSC-13609-1] c 05 N72-25122

Reaction tester  
[NASA-CASE-MSC-13604-1] c 05 N73-13114

Air conditioned suit  
[NASA-CASE-LAR-10076-1] c 05 N73-20137

Compton scatter attenuation gamma ray spectrometer  
[NASA-CASE-MFS-21441-1] c 14 N73-30392

Inverter ratio failure detector  
[NASA-CASE-NPO-13160-1] c 35 N74-18090

Electrophoretic sample insertion  
[NASA-CASE-MFS-21395-1] c 25 N74-26948

Apparatus for conducting flow electrophoresis in the substantial absence of gravity  
[NASA-CASE-MFS-21394-1] c 34 N74-27744

Multiparameter vision testing apparatus  
[NASA-CASE-MSC-13601-2] c 54 N75-27759

Automatic biowaste sampling  
[NASA-CASE-MSC-14640-1] c 54 N76-14804

Solar cell module  
[NASA-CASE-NPO-14467-1] c 44 N79-31753

Voltage feed through apparatus having reduced partial discharge  
[NASA-CASE-GSC-12347-1] c 33 N80-18286

**General Electric Co., Pleasanton, Calif.**

Method of making a cermet  
[NASA-CASE-LEW-10219-1] c 18 N71-28729

**General Electric Co., Schenectady, N. Y.**

Superconductive accelerometer  
[NASA-CASE-XMF-01099] c 14 N71-15969

Remote manipulator system  
[NASA-CASE-MFS-22022-1] c 37 N76-15460

Automatic transponder  
[NASA-CASE-GSC-12075-1] c 32 N77-31350

Directionally solidified eutectic gamma plus beta nickel-base superalloys  
[NASA-CASE-LEW-12906-1] c 26 N77-32279

**General Electric Co., Utica, N. Y.**

Method of determining bond quality of power transistors attached to substrates  
[NASA-CASE-MFS-21931-1] c 37 N75-26372

**General Motors Corp., Detroit, Mich.**

Hermetic sealed vibration damper  
[NASA-CASE-MSC-10959] c 15 N71-26243

**General Motors Corp., Milwaukee, Wis.**

Adjustable tension wire guide  
[NASA-CASE-XMS-02383] c 15 N71-15918

**General Motors Corp., Santa Barbara, Calif.**

Resilient wheel  
[NASA-CASE-MFS-13929] c 15 N71-27091

**General Precision, Inc., Little Falls, N.J.**

Reversible current control apparatus  
[NASA-CASE-XLA-09371] c 10 N71-18724

**General Precision, Inc., Sunnyvale, Calif.**

Broadband video process with very high input impedance  
[NASA-CASE-NPO-10199] c 09 N72-17156

**General Precision Systems, Inc., Little Falls, N.J.**

Fluidic-thermochromic display device  
[NASA-CASE-ERC-10031] c 12 N71-18603

**General Research Corp., Santa Barbara, Calif.**

Sequentially deployable maneuverable tetrahedral beam  
[NASA-CASE-LAR-13098-1] c 31 N86-19479

**General Technologies Corp., Reston, Va.**

Method of making reinforced composite structure  
[NASA-CASE-LEW-12619-1] c 24 N77-19171

**Geophysics Corp. of America, Bedford, Mass.**

Inflation system for balloon type satellites  
[NASA-CASE-XGS-03351] c 31 N71-16081

Bakeable McLeod gauge  
[NASA-CASE-XGS-01293-1] c 35 N79-33450

**Geophysics Corp. of America, Boston, Mass.**

Ionospheric battery  
[NASA-CASE-XGS-01593] c 03 N70-35408

**George Washington Univ., Washington, D.C.**

Bacteria detection instrument and method  
[NASA-CASE-GSC-11533-1] c 14 N73-13435

Arterial pulse wave pressure transducer  
[NASA-CASE-GSC-11531-1] c 52 N74-27566

**Giannini Scientific Corp., Santa Ana, Calif.**

Electric arc light source having undercut recessed anode  
[NASA-CASE-ARC-10266-1] c 33 N75-29318

Combination automatic-starting electrical plasma torch and gas shutoff valve  
[NASA-CASE-XLE-10717] c 37 N75-29426

**Giner, Inc., Waltham, Mass.**

Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-1] c 33 N80-20487

Catalyst surfaces for the chromous/chromic redox couple  
[NASA-CASE-LEW-13148-2] c 44 N81-29524

**Globe-Union, Inc., Milwaukee, Wis.**

Method of coating solar cell with borosilicate glass and resultant product  
[NASA-CASE-GSC-11514-1] c 03 N72-24037

**Goodyear Aerospace Corp., Akron, Ohio.**

Foldable solar concentrator  
[NASA-CASE-XLA-04622] c 03 N70-41580

Method of making a filament-wound container  
[NASA-CASE-XLE-03803-2] c 15 N71-17651

Filament wound container  
[NASA-CASE-XLE-03803] c 15 N71-23816

Panelized high performance multilayer insulation  
[NASA-CASE-MFS-14023] c 33 N71-25351

Thermally activated foaming compositions  
[NASA-CASE-LAR-10373-1] c 18 N71-26155

Compression test assembly  
[NASA-CASE-LAR-10440-1] c 14 N73-32323

Deployable flexible tunnel  
[NASA-CASE-MFS-22636-1] c 37 N76-22540

**Grace (W. R.) and Co., Clarksville, Md.**

Metal containing polymers from cyclic tetrameric phenylphosphonitriamides  
[NASA-CASE-HQN-10364] c 06 N71-27363

**Grumman Aerospace Corp., Bethpage, N. Y.**

Pumped two-phase heat transfer loop  
[NASA-CASE-MSC-20841-1] c 34 N86-20721

Sun shield  
[NASA-CASE-MSC-20162-1] c 37 N86-20803

Multi-leg heat pipe evaporator  
[NASA-CASE-MSC-20812-1] c 34 N86-27593

**Grumman Aircraft Engineering Corp., Bethpage, N. Y.**

Sealed cabinetry  
[NASA-CASE-MSC-12168-1] c 09 N71-18600

Out of tolerance warning alarm system for plurality of monitored circuits  
[NASA-CASE-XMS-10984-1] c 10 N71-19417

**Gulf General Atomic, San Diego, Calif.**

Waveform simulator  
[NASA-CASE-NPO-10251] c 10 N71-27365

**Guilford Industries, Inc., Albuquerque, N.Mex.**

Analog-to-digital converter  
[NASA-CASE-MSC-13110-1] c 08 N72-22163

## H

**Hamilton Standard, Windsor Locks, Conn.**

Venting device for pressurized space suit helmet  
[NASA-CASE-XMS-09652-1] c 05 N71-26333

Regenerable device for scrubbing breathable air of CO<sub>2</sub> and moisture without special heat exchanger equipment  
[NASA-CASE-MSC-14771-1] c 54 N77-32722

Cell and method for electrolysis of water and anode  
[NASA-CASE-MSC-16394-1] c 28 N81-24280

Slow opening valve  
[NASA-CASE-MSC-20112-1] c 37 N85-20338

**Hamilton Standard Div., United Aircraft Corp., Windsor Locks, Conn.**

Condensate removal device for heat exchanger  
[NASA-CASE-MSC-14143-1] c 77 N75-20139

**Harris Corp., Melbourne, Fla.**

Adaptive polarization separation  
[NASA-CASE-LAR-12106-1] c 33 N81-26358

Telescoping columns  
[NASA-CASE-LAR-12195-1] c 31 N81-27324

**Hayes International Corp., Birmingham, Ala.**

Space craft soft landing system  
[NASA-CASE-XMF-02108] c 31 N70-36845

Device for preventing high voltage arcing in electron beam welding  
[NASA-CASE-XMF-08522] c 15 N71-19486

**Hayes International Corp., Huntsville, Ala.**

Method and apparatus for cryogenic wire stripping  
[NASA-CASE-MFS-10340] c 15 N71-17628

Self-balancing strain gauge transducer  
[NASA-CASE-MFS-12827] c 14 N71-17656

Automatic closed circuit television arc guidance control  
[NASA-CASE-MFS-13046] c 07 N71-19433

**Hazleton Labs., Falls Church, Va.**

Use of the enzyme hexokinase for the reduction of inherent light levels  
[NASA-CASE-XGS-05533] c 04 N69-27487

Light detection instrument  
[NASA-CASE-XGS-05534] c 23 N71-16355

Lyophilized reaction mixtures  
[NASA-CASE-XGS-05532] c 06 N71-17705

Firefly pump-metering system  
[NASA-CASE-GSC-10218-1] c 15 N72-21465

**HC Chem Research and Service, San Jose, Calif.**

High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1-SB] c 24 N85-30033

High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590

**Hercules, Inc., Wilmington, Del.**

Method of repairing discontinuity in fiberglass structures  
[NASA-CASE-LAR-10416-1] c 24 N74-30001

**Hoffman Electronics Corp., El Monte, Calif.**

Method for producing a solar cell having an integral protective covering  
[NASA-CASE-XGS-04531] c 03 N69-24267

**Honeywell, Inc., Hopkins, Minn.**

Frequency control network for a current feedback oscillator  
[NASA-CASE-GSC-10041-1] c 10 N71-19418

**Honeywell, Inc., Minneapolis, Minn.**

Bus voltage compensation circuit for controlling direct current motor  
[NASA-CASE-XMS-04215-1] c 09 N69-39987

Apparatus for overcurrent protection of a push-pull amplifier  
[NASA-CASE-MSC-12033-1] c 09 N71-13531

Static inverter  
[NASA-CASE-XGS-05289] c 09 N71-19470

High impedance measuring apparatus  
[NASA-CASE-XMS-08589-1] c 09 N71-20569

Clamping assembly for inertial components  
[NASA-CASE-XMS-02184] c 15 N71-20813

Piezoelectric pump  
[NASA-CASE-XNP-05429] c 26 N71-21824

Controllers  
[NASA-CASE-XMS-07487] c 15 N71-23255

Convoluting device for forming convolutions and the like  
[NASA-CASE-XNP-05297] c 15 N71-23811

- Failure sensing and protection circuit for converter networks Patent  
[NASA-CASE-GSC-10114-1] c 10 N71-27386
- Voice operated controller Patent  
[NASA-CASE-XLA-04063] c 31 N71-33180
- Load current sensor for a series pulse width modulated power supply  
[NASA-CASE-GSC-10656-1] c 09 N72-25249
- Radiant source tracker independent of nonconstant irradiance  
[NASA-CASE-NPO-11686] c 14 N73-25462
- Optical instruments  
[NASA-CASE-MSC-14096-1] c 74 N74-15095
- Method of forming shrink-fit compression seal  
[NASA-CASE-LAR-11563-1] c 37 N77-23482
- Honeywell, Inc., St. Petersburg, Fla.**  
Reconfiguring redundancy management  
[NASA-CASE-MSC-18498-1] c 60 N82-29013
- Houston Univ., Tex.**  
Analysis of volatile organic compounds  
[NASA-CASE-MSC-14428-1] c 23 N77-17181
- Howard Univ., Washington, D. C.**  
Locking mechanism for orthopedic braces  
[NASA-CASE-GSC-12082-1] c 54 N76-22914
- Locking mechanism for orthopedic braces  
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[NASA-CASE-XNP-05535] c 14 N71-23040

Time of flight mass spectrometer with feedback means from the detector to the low source and a specific counter Patent  
[NASA-CASE-XNP-01056] c 14 N71-23041

Connector internal force gauge Patent  
[NASA-CASE-XNP-03918] c 14 N71-23087

Circulator having quarter wavelength resonant post and parametric amplifier circuits utilizing the same Patent  
[NASA-CASE-XNP-02140] c 09 N71-23097

Method of resolving clock synchronization error and means therefor Patent  
[NASA-CASE-XNP-08875] c 10 N71-23099

Impact testing machine Patent  
[NASA-CASE-XNP-04817] c 14 N71-23225

Zeta potential flowmeter Patent  
[NASA-CASE-XNP-06509] c 14 N71-23226

Comparator for the comparison of two binary numbers Patent  
[NASA-CASE-XNP-04819] c 08 N71-23295

Decontamination of petroleum products Patent  
[NASA-CASE-XNP-03835] c 06 N71-23499

Dicyanoacetylene polymers Patent  
[NASA-CASE-XNP-03250] c 06 N71-23500

Indexing microwave switch Patent  
[NASA-CASE-XNP-06507] c 09 N71-23548

Millimeter wave radiometer for radio astronomy Patent  
[NASA-CASE-XNP-09832] c 30 N71-23723

Radiant energy intensity measurement system Patent  
[NASA-CASE-XNP-06510] c 14 N71-23797

High speed phase detector Patent  
[NASA-CASE-XNP-01306-2] c 09 N71-24596

Apparatus for testing polymeric materials Patent  
[NASA-CASE-XNP-09699] c 06 N71-24607

Digital synchronizer Patent  
[NASA-CASE-NPO-10851] c 07 N71-24613

Signal processing apparatus for multiplex transmission Patent  
[NASA-CASE-NPO-10388] c 07 N71-24622

Self-testing and repairing computer Patent  
[NASA-CASE-NPO-10567] c 08 N71-24633

Serial digital decoder Patent  
[NASA-CASE-NPO-10150] c 08 N71-24650

Detenting servomotor Patent  
[NASA-CASE-XNP-06936] c 15 N71-24695

Reversible motion drive system Patent  
[NASA-CASE-NPO-10173] c 15 N71-24696

Decoder system Patent  
[NASA-CASE-NPO-10118] c 07 N71-24741

Television signal processing system Patent  
[NASA-CASE-NPO-10140] c 07 N71-24742

Switching circuit Patent  
[NASA-CASE-XNP-06505] c 10 N71-24799

Magnetic power switch Patent  
[NASA-CASE-NPO-10242] c 09 N71-24803

Remodulator filter Patent  
[NASA-CASE-NPO-10198] c 09 N71-24806

Broadband microwave waveguide window Patent  
[NASA-CASE-XNP-08880] c 09 N71-24808

Cavity radiometer Patent  
[NASA-CASE-XNP-08961] c 14 N71-24809

High-gain, broadband traveling wave maser Patent  
[NASA-CASE-NPO-10548] c 16 N71-24831

Fluid containers and resealable septum therefor Patent  
[NASA-CASE-NPO-10123] c 15 N71-24835

Temperature telemetric transmitter Patent  
[NASA-CASE-NPO-10649] c 07 N71-24840

Tuning arrangement for an electron discharge device or the like Patent  
[NASA-CASE-XNP-09771] c 09 N71-24841

Noise limiter Patent  
[NASA-CASE-NPO-10189] c 10 N71-24844

Noninterruptable digital counting system Patent  
[NASA-CASE-XNP-09758] c 08 N71-24891

Drive circuit for minimizing power consumption in inductive load Patent  
[NASA-CASE-NPO-10716] c 09 N71-24892

Space simulator Patent  
[NASA-CASE-NPO-10141] c 11 N71-24964

Process for reducing secondary electron emission Patent  
[NASA-CASE-XNP-09469] c 24 N71-25555

Minimal logic block encoder Patent  
[NASA-CASE-NPO-10595] c 10 N71-25917

Novel polycarboxylic prepolymeric materials and polymers thereof Patent  
[NASA-CASE-NPO-10596] c 06 N71-25929

Current steering switch Patent  
[NASA-CASE-XNP-08567] c 09 N71-26000

Dual polarity full wave dc motor drive Patent  
[NASA-CASE-XNP-07477] c 09 N71-26092

High impact antenna Patent  
[NASA-CASE-NPO-10231] c 07 N71-26101

Video communication system and apparatus Patent  
[NASA-CASE-XNP-06611] c 07 N71-26102

Parallel generation of the check bits of a PN sequence Patent  
[NASA-CASE-XNP-04623] c 10 N71-26103

Phase multiplying electronic scanning system Patent  
[NASA-CASE-NPO-10302] c 10 N71-26142

Electron beam tube containing a multiple cathode array employing indexing means for cathode substitution Patent  
[NASA-CASE-NPO-10625] c 09 N71-26182

Fluid phase analyzer Patent  
[NASA-CASE-NPO-10691] c 14 N71-26199

Variable frequency nuclear magnetic resonance spectrometer Patent  
[NASA-CASE-XNP-09830] c 14 N71-26266

Time synchronization system utilizing moon reflected coded signals Patent  
[NASA-CASE-NPO-10143] c 10 N71-26326

Broadband stable power multiplier Patent  
[NASA-CASE-XNP-10854] c 10 N71-26331

Cascaded complementary pair broadband transistor amplifiers Patent  
[NASA-CASE-NPO-10003] c 10 N71-26415

Digital memory in which the driving of each word location is controlled by a switch core Patent  
[NASA-CASE-XNP-01466] c 10 N71-26434

Conically shaped cavity radiometer with a dual purpose cone winding Patent  
[NASA-CASE-XNP-09701] c 14 N71-26475

Analog signal integration and reconstruction system Patent  
[NASA-CASE-NPO-10344] c 10 N71-26544

Rapid sync acquisition system Patent  
[NASA-CASE-NPO-10214] c 10 N71-26577

Cryogenic cooling system Patent  
[NASA-CASE-NPO-10467] c 23 N71-26654

Vacuum evaporator with electromagnetic ion steering Patent  
[NASA-CASE-NPO-10331] c 09 N71-26701

Automated fluid chemical analyzer Patent  
[NASA-CASE-XNP-09451] c 06 N71-26754

Material handling device Patent  
[NASA-CASE-XNP-09770-3] c 11 N71-27036

Pressure seal Patent  
[NASA-CASE-NPO-10796] c 15 N71-27068

Multiducted electromagnetic pump Patent  
[NASA-CASE-NPO-10755] c 15 N71-27084

Peak acceleration limiter for vibrational tester Patent  
[NASA-CASE-NPO-10558] c 14 N71-27185

Thin film capacitive bolometer and temperature sensor Patent  
[NASA-CASE-NPO-10607] c 09 N71-27232

Black body cavity radiometer Patent  
[NASA-CASE-NPO-10810] c 14 N71-27323

Video signal enhancement system with dynamic range compression and modulation index expansion Patent  
[NASA-CASE-NPO-10343] c 07 N71-27341

Force-balanced, throttle valve Patent  
[NASA-CASE-NPO-10808] c 15 N71-27432

Cavity emitter for thermionic converter Patent  
[NASA-CASE-NPO-10412] c 09 N71-28421

Frictionless universal joint Patent  
[NASA-CASE-NPO-10646] c 15 N71-28467

Epoxy-aziridine polymer product Patent  
[NASA-CASE-NPO-10701] c 06 N71-28620

Fluid impervious barrier including liquid metal alloy and method of making same Patent  
[NASA-CASE-XNP-08881] c 17 N71-28747

Wind tunnel microphone structure Patent  
[NASA-CASE-NPO-00250] c 11 N71-28779

Trialkyl-dihalotantalum and niobium compounds Patent  
[NASA-CASE-XNP-04023] c 06 N71-28808

Digital memory sense amplifying means Patent  
[NASA-CASE-XNP-01012] c 08 N71-28925

Digital filter for reducing sampling jitter in digital control systems Patent  
[NASA-CASE-NPO-11088] c 08 N71-29034

Method and apparatus for aligning a laser beam projector Patent  
[NASA-CASE-NPO-11087] c 23 N71-29125

Rotable accurate reflector system for telescopes Patent  
[NASA-CASE-NPO-10468] c 23 N71-33229

Encoder/decoder system for a rapidly synchronizable binary code Patent  
[NASA-CASE-NPO-10342] c 10 N71-33407

High power microwave power divider Patent  
[NASA-CASE-NPO-11031] c 07 N71-33806

A dc servosystem including an ac motor Patent  
[NASA-CASE-NPO-10700] c 07 N71-33613

Solar cell matrix  
[NASA-CASE-NPO-11190] c 03 N71-34044

Manually actuated heat pump  
[NASA-CASE-NPO-10677] c 05 N71-11084

Virtual wall slot circularly polarized planar array antenna  
[NASA-CASE-NPO-10301] c 07 N71-11148

System for controlling the operation of a variable signal device  
[NASA-CASE-NPO-11064] c 07 N71-11150

Method and apparatus for data compression by a decreasing slope threshold test  
[NASA-CASE-NPO-10769] c 08 N71-11171

Apparatus for remote measurement of displacement of marks on a specimen undergoing a tensile test  
[NASA-CASE-NPO-10778] c 14 N71-11364

Vibration isolation system using compression springs  
[NASA-CASE-NPO-11012] c 15 N71-11391

Feed system for an ion thruster  
[NASA-CASE-NPO-10737] c 28 N71-11709

Thermostatic actuator  
[NASA-CASE-NPO-10637] c 15 N71-12409

High voltage transistor amplifier with constant current load  
[NASA-CASE-NPO-11023] c 09 N71-17155

Reference voltage switching unit  
[NASA-CASE-NPO-11253] c 09 N71-17157

Valving device for automatic refilling in cryogenic liquid systems  
[NASA-CASE-NPO-11177] c 15 N71-17453

Expandable support means  
[NASA-CASE-NPO-11059] c 15 N71-17454

Breakaway connector  
[NASA-CASE-NPO-11140] c 15 N71-17455

Modular encoder  
[NASA-CASE-NPO-10629] c 08 N71-18184

Transition tracking bit synchronization system  
[NASA-CASE-NPO-10844] c 07 N71-20140

Data compression system  
[NASA-CASE-NPO-11243] c 07 N71-20154

Digital quasi-exponential function generator  
[NASA-CASE-NPO-11130] c 08 N71-20176

Method and apparatus for high resolution spectral analysis  
[NASA-CASE-NPO-10748] c 08 N71-20177

Flow rate switch  
[NASA-CASE-NPO-10722] c 09 N71-20199

Electrical connector  
[NASA-CASE-NPO-10694] c 09 N71-20200

Wide band doubler and sine wave quadrature generator  
[NASA-CASE-NPO-11133] c 10 N71-20223

Signal phase estimator  
[NASA-CASE-NPO-11203] c 10 N72-20224  
Optimal control system for an electric motor driven vehicle  
[NASA-CASE-NPO-11210] c 11 N72-20244  
Impact energy absorbing system utilizing fractureable material  
[NASA-CASE-NPO-10671] c 15 N72-20443  
Torsional disconnect unit  
[NASA-CASE-NPO-10704] c 15 N72-20445  
Solid propellant rocket motor  
[NASA-CASE-NPO-03282] c 28 N72-20758  
Shell side liquid metal boiler  
[NASA-CASE-NPO-10831] c 33 N72-20915  
Method and apparatus for mapping planets  
[NASA-CASE-NPO-11001] c 07 N72-21118  
Current steering commutator  
[NASA-CASE-NPO-10743] c 08 N72-21199  
Automated equipotential plotter  
[NASA-CASE-NPO-11134] c 09 N72-21246  
Pressure transducer  
[NASA-CASE-NPO-10832] c 14 N72-21405  
Positioning mechanism  
[NASA-CASE-NPO-10679] c 15 N72-21462  
Solid state matrices  
[NASA-CASE-NPO-10591] c 03 N72-22041  
Solar cell panels with light transmitting plate  
[NASA-CASE-NPO-10747] c 03 N72-22042  
Data multiplexer using tree switching configuration  
[NASA-CASE-NPO-11333] c 08 N72-22162  
System for quantizing graphic displays  
[NASA-CASE-NPO-10745] c 08 N72-22164  
Digital function generator  
[NASA-CASE-NPO-11104] c 08 N72-22165  
Analog-to-digital converter analyzing system  
[NASA-CASE-NPO-10560] c 08 N72-22166  
Feedback shift register with states decomposed into cycles of equal length  
[NASA-CASE-NPO-11082] c 08 N72-22167  
Self-obtaining, gas operated launcher  
[NASA-CASE-NPO-11013] c 11 N72-22247  
Optical binocular scanning apparatus  
[NASA-CASE-NPO-11002] c 14 N72-22441  
Ionene membrane separator  
[NASA-CASE-NPO-11091] c 18 N72-22567  
Deployable solar cell array  
[NASA-CASE-NPO-10883] c 31 N72-22874  
Thermal to electrical power conversion system with solid-state switches with Seebeck effect compensation  
[NASA-CASE-NPO-11388] c 03 N72-23048  
Optical frequency waveguide and transmission system  
[NASA-CASE-NPO-10541-3] c 23 N72-23695  
Bipropellant injector  
[NASA-CASE-NPO-09461] c 28 N72-23809  
Solid propellant rocket motor nozzle  
[NASA-CASE-NPO-11458] c 28 N72-23810  
Analysis of hydrogen-deuterium mixtures  
[NASA-CASE-NPO-11322] c 06 N72-25146  
Flexible computer accessed telemetry  
[NASA-CASE-NPO-11358] c 07 N72-25172  
Multi-purpose antenna employing dish reflector with plural coaxial horn feeds  
[NASA-CASE-NPO-11264] c 07 N72-25174  
Communications link for computers  
[NASA-CASE-NPO-11161] c 08 N72-25207  
Method and apparatus for frequency-division multiplex communications by digital phase shift of carrier  
[NASA-CASE-NPO-11338] c 08 N72-25208  
Binary coded sequential acquisition ranging system  
[NASA-CASE-NPO-11194] c 08 N72-25209  
MOD 2 sequential function generator for multibit binary sequence  
[NASA-CASE-NPO-10636] c 08 N72-25210  
Digital video display system using cathode ray tube  
[NASA-CASE-NPO-11342] c 09 N72-25248  
Inverter oscillator with voltage feedback  
[NASA-CASE-NPO-10760] c 09 N72-25254  
Thermal motor  
[NASA-CASE-NPO-11283] c 09 N72-25260  
Two phase flow system with discrete impinging two-phase jets  
[NASA-CASE-NPO-11556] c 12 N72-25292  
Atmospheric sampling devices  
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Light sensor  
[NASA-CASE-NPO-11311] c 14 N72-25414  
Quick disconnect coupling  
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Coaxial injector for reaction motors  
[NASA-CASE-NPO-11095] c 15 N72-25455  
Ball screw linear actuator  
[NASA-CASE-NPO-11222] c 15 N72-25456  
Helium refrigerator and method for decontaminating the refrigerator  
[NASA-CASE-NPO-10634] c 23 N72-25619

Uninsulated in-core thermionic diode  
[NASA-CASE-NPO-10542] c 09 N72-27228  
Audio frequency marker system  
[NASA-CASE-NPO-11147] c 14 N72-27408  
Light direction sensor  
[NASA-CASE-NPO-11201] c 14 N72-27409  
Adjustable support  
[NASA-CASE-NPO-10721] c 15 N72-27484  
Method for controlling vapor content of a gas  
[NASA-CASE-NPO-10633] c 03 N72-28025  
Maser for frequencies in the 7-20 GHz range  
[NASA-CASE-NPO-11437] c 16 N72-28521  
Thin film temperature sensor and method of making same  
[NASA-CASE-NPO-11775] c 26 N72-28761  
Circularly polarized antenna  
[NASA-CASE-NPO-10214] c 09 N72-31235  
Singly-curved reflector for use in high-gain antennas  
[NASA-CASE-NPO-11361] c 07 N72-32169  
Digital slope threshold data compressor  
[NASA-CASE-NPO-11630] c 08 N72-33172  
Continuously variable voltage controlled phase shifter  
[NASA-CASE-NPO-11129] c 09 N72-33204  
Pseudonoise sequence generators with three tap linear feedback shift registers  
[NASA-CASE-NPO-11406] c 08 N73-12175  
Versatile arithmetic unit for high speed sequential decoder  
[NASA-CASE-NPO-11371] c 08 N73-12177  
Dual frequency microwave reflex feed  
[NASA-CASE-NPO-13091-1] c 09 N73-12214  
Audio system with means for reducing noise effects  
[NASA-CASE-NPO-11631] c 10 N73-12244  
Interferometer-polarimeter  
[NASA-CASE-NPO-11239] c 14 N73-12446  
Irradiance measuring device  
[NASA-CASE-NPO-11493] c 14 N73-12447  
Program for computer aided reliability estimation  
[NASA-CASE-NPO-13086-1] c 15 N73-12495  
Apparatus for deriving synchronizing pulses from pulses in a single channel PCM communications system  
[NASA-CASE-NPO-11302-1] c 07 N73-13149  
Rotary vane attenuator wherein rotor has orthogonally disposed resistive and dielectric cards  
[NASA-CASE-NPO-11418-1] c 14 N73-13420  
Gas flow control device  
[NASA-CASE-NPO-11479] c 15 N73-13462  
Electrolytic gas operated actuator  
[NASA-CASE-NPO-11369] c 15 N73-13467  
Dual purpose momentum wheels for spacecraft with magnetic recording  
[NASA-CASE-NPO-11481] c 21 N73-13644  
Multiple reflection conical microwave antenna  
[NASA-CASE-NPO-11661] c 07 N73-14130  
Cyclically operable optical shutter  
[NASA-CASE-NPO-10758] c 14 N73-14427  
Heat detection and compositions and devices therefor  
[NASA-CASE-NPO-10764-1] c 14 N73-14428  
Parallel-plate viscometer with double diaphragm suspension  
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Rotary actuator  
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Magnetically actuated tuning method for Gunn oscillators  
[NASA-CASE-NPO-12106] c 09 N73-15235  
Multichannel telemetry system  
[NASA-CASE-NPO-11572] c 07 N73-16121  
Data-aided carrier tracking loops  
[NASA-CASE-NPO-11282] c 10 N73-16205  
Stacked solar cell arrays  
[NASA-CASE-NPO-11771] c 03 N73-20040  
A m-ary linear feedback shift register with binary logic  
[NASA-CASE-NPO-11868] c 10 N73-20254  
Apparatus for recovering matter adhered to a host surface  
[NASA-CASE-NPO-11213] c 15 N73-20514  
Scan converting video tape recorder  
[NASA-CASE-NPO-10166-1] c 07 N73-22076  
Collapsible structure for an antenna reflector  
[NASA-CASE-NPO-11751] c 07 N73-24176  
Pump for delivering heated fluids  
[NASA-CASE-NPO-11417] c 15 N73-24513  
Ion thruster with a combination keeper electrode and electron baffle  
[NASA-CASE-NPO-11880] c 28 N73-24783  
Solid propellant rocket motor  
[NASA-CASE-NPO-11559] c 28 N73-24784  
Code regenerative clean-up loop transponder for a mu-type ranging system  
[NASA-CASE-NPO-11707] c 07 N73-25161  
Numerical computer peripheral interactive device with manual controls  
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Radiant source tracker independent of nonconstant irradiance  
[NASA-CASE-NPO-11686] c 14 N73-25462  
Two carrier communication system with single transmitter  
[NASA-CASE-NPO-11548] c 07 N73-26118  
High pulse rate high resolution optical radar system  
[NASA-CASE-NPO-11426] c 07 N73-26119  
Counting digital filters  
[NASA-CASE-NPO-11821-1] c 08 N73-26175  
Automated attendance accounting system  
[NASA-CASE-NPO-11456] c 08 N73-26176  
Low phase noise digital frequency divider  
[NASA-CASE-NPO-11569] c 10 N73-26229  
Vehicle for use in planetary exploration  
[NASA-CASE-NPO-11366] c 11 N73-26238  
Temperature control system with a pulse width modulated bridge  
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Disconnect unit  
[NASA-CASE-NPO-11330] c 33 N73-26958  
Filter for third order phase locked loops  
[NASA-CASE-NPO-11941-1] c 10 N73-27171  
Receiver with an improved phase lock loop in a multichannel telemetry system with suppressed carrier  
[NASA-CASE-NPO-11593-1] c 07 N73-28012  
Analog-to-digital converter  
[NASA-CASE-NPO-00477] c 08 N73-28045  
Pseudonoise (PN) synchronization of data system with derivation of clock frequency from received signal for clocking receiver PN generator  
[NASA-CASE-NPO-03623] c 09 N73-28084  
Apparatus and method for measuring the Seebeck coefficient and resistivity of materials  
[NASA-CASE-NPO-11749] c 14 N73-28486  
Dual purpose optical instrument capable of simultaneously acting as spectrometer and diffractometer  
[NASA-CASE-NPO-05231] c 14 N73-28491  
Continuous magnetic flux pump  
[NASA-CASE-NPO-01187] c 15 N73-28516  
Preparation of alkali metal dispersions  
[NASA-CASE-NPO-08878] c 17 N73-28573  
Superconductive magnetic-field-trapping device  
[NASA-CASE-NPO-01185] c 26 N73-28710  
Automatic carrier acquisition system  
[NASA-CASE-NPO-11628-1] c 07 N73-30113  
Ferromagnetic solenoid  
[NASA-CASE-NPO-11738-1] c 09 N73-30185  
Silent emergency alarm system for schools and the like  
[NASA-CASE-NPO-11307-1] c 10 N73-30205  
RF-source resistance meters  
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Event sequence detector  
[NASA-CASE-NPO-11703-1] c 10 N73-32144  
Soil penetrometer  
[NASA-CASE-NPO-05530] c 14 N73-32321  
Quadrupole mass filter with means to generate a noise spectrum exclusive of the resonant frequency of the desired ions to deflect stable ions  
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Magnetic flux pump  
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Borrowing apparatus  
[NASA-CASE-NPO-07169] c 15 N73-32362  
Electrostatically controlled heat shutter  
[NASA-CASE-NPO-11942-1] c 33 N73-32818  
Method and apparatus for a single channel digital communications system  
[NASA-CASE-NPO-11302-2] c 32 N74-10132  
Controlled oscillator system with a time dependent output frequency  
[NASA-CASE-NPO-11962-1] c 33 N74-10194  
Low loss dichroic plate  
[NASA-CASE-NPO-13171-1] c 32 N74-11000  
Image data rate converter having a drum with a fixed head and a rotatable head  
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Monitoring atmospheric pollutants with a heterodyne radiometer transmitter-receiver  
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Thermomagnetic recording and magneto-optic playback system having constant intensity laser beam control  
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- Thin film gauge  
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- High isolation RF signal selection switches  
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- Single reflector interference spectrometer and drive system therefor  
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- Scanning nozzle plating system  
[NASA-CASE-NPO-11758-1] c 31 N74-23065
- Rock sampling  
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- Rock sampling  
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- Miniature multichannel biotelemetry system  
[NASA-CASE-NPO-13065-1] c 52 N74-26625
- Dispensing targets for ion beam particle generators  
[NASA-CASE-NPO-13112-1] c 73 N74-26767
- Optically detonated explosive device  
[NASA-CASE-NPO-11743-1] c 28 N74-27425
- Coherent receiver employing nonlinear coherence detection for carrier tracking  
[NASA-CASE-NPO-11921-1] c 32 N74-30523
- Digital servo control of random sound test excitation  
[NASA-CASE-NPO-11623-1] c 71 N74-31148
- Apparatus for forming drive belts  
[NASA-CASE-NPO-13205-1] c 31 N74-32917
- Tool for use in lifting pin supported objects  
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[NASA-CASE-NPO-13281-1] c 37 N75-13266
- Method of producing a storage bulb for an atomic hydrogen maser  
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- Combined pressure regulator and shutoff valve  
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- Synthesis of 2,4,8,10-tetroxaspiro[5.5]undecane  
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- Fire-resistant phosphorus containing polyimides and copolyimides  
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- Toughening reinforced epoxy composites with brominated polymeric additives  
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- Metal phthalocyanine intermediates for the preparation of polymers  
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- Optical spin compensator  
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- Waveguide mixer  
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- Two color horizon sensor  
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- Ultraviolet atomic emission detector  
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- Optical pump and driver system for lasers  
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[NASA-CASE-ERC-10081] c 14 N72-28437
- Head-up attitude display  
[NASA-CASE-ERC-10392] c 21 N73-14692
- System for indicating direction of intruder aircraft  
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- Aircraft control system  
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- Shock-layer radiation measurement  
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- Protective circuit of the spark gap type  
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- Differential pressure cell Patent  
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- Three-axis controller Patent  
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- Proportional controller Patent  
[NASA-CASE-XAC-03392] c 03 N70-41954
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[NASA-CASE-ARC-10043-1] c 05 N71-11193
- Telemeter adaptable for implanting in an animal Patent  
[NASA-CASE-XAC-05706] c 05 N71-12342
- Gyrator type circuit Patent  
[NASA-CASE-XAC-10608-1] c 09 N71-12517
- Ultraviolet resonance lamp Patent  
[NASA-CASE-ARC-10030] c 09 N71-12521
- Differential temperature transducer Patent  
[NASA-CASE-XAC-00812] c 14 N71-15598
- Multiple circuit switch apparatus with improved pivot actuator structure Patent  
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- Method of planetary atmospheric investigation using a split-trajectory dual flyby mode Patent  
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- High efficiency multivibrator Patent  
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- Flight craft Patent  
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- Three-axis finger tip controller for switches Patent  
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- Electrostatic charged particle analyzer having deflection members shaped according to the periodic voltage applied thereto Patent  
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[NASA-CASE-XAC-01677] c 09 N71-20816
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[NASA-CASE-XAC-06956] c 15 N71-21177
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- Deep space monitor communication satellite system Patent  
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- Energy limiter for hydraulic actuators Patent  
[NASA-CASE-ARC-10131-1] c 15 N71-27754
- Multivibrator circuit with means to prevent false triggering from supply voltage fluctuations Patent  
[NASA-CASE-ARC-10137-1] c 09 N71-28468
- Locomotion and restraint aid Patent  
[NASA-CASE-ARC-10153] c 05 N71-28619
- Line following servosystem Patent  
[NASA-CASE-XAC-00001] c 15 N71-28952
- Mechanically limited, electrically operated hydraulic valve system for aircraft controls Patent  
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A method and apparatus for making an optical element having a dielectric film  
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The 1-(diorganoxyphosphonyl)methyl-2, 4- and -2, 6-dinitro and diamino benzenes and their derivatives  
[NASA-CASE-ARC-11425-2] c 23 N86-20499  
Copolymers of vinyl styrylpyridines or vinyl stilbazoles with bismaleimide  
[NASA-CASE-ARC-11429-1-CU] c 27 N86-20560  
Laboratory glassware rack for seismic safety  
[NASA-CASE-ARC-11422-1] c 35 N86-20751  
Segmented tubular cushion springs and spring assembly  
[NASA-CASE-ARC-11349-1] c 37 N86-20797  
Perfluoro (imidoylamidine) diamidines  
[NASA-CASE-ARC-11402-3] c 23 N86-21582  
High performance mixed bisimide resins and composites based thereon  
[NASA-CASE-ARC-11538-1SB] c 24 N86-21590  
Aminophenoxycyclotriphosphazene cured epoxy resins and the composites, laminates and structures thereof  
[NASA-CASE-ARC-11548-1] c 27 N86-21686  
Self-compensating solenoid valve  
[NASA-CASE-ARC-11620-1] c 37 N86-21859  
Airborne tracking Sun photometer apparatus and system  
[NASA-CASE-ARC-11622-1] c 44 N86-21982  
Swashplate control system  
[NASA-CASE-ARC-11633-1] c 08 N86-24700  
Liquid seeding atomizer  
[NASA-CASE-ARC-11631-1] c 34 N86-24935  
Dual mode laser velocimeter  
[NASA-CASE-ARC-11634-1] c 36 N86-24978  
Laminate comprising fibers embedded in cured amine terminated bis-imide  
[NASA-CASE-ARC-11421-3] c 24 N86-25416  
Thumb-actuated two-axis controller  
[NASA-CASE-ARC-11372-1] c 08 N86-27288  
Toughening reinforced epoxy composites with brominated polymeric additives  
[NASA-CASE-ARC-11427-2] c 27 N86-27451  
Load positioning system with gravity compensation  
[NASA-CASE-ARC-11525-1] c 37 N86-27629  
Light weight fire resistant graphite composites  
[NASA-CASE-ARC-11615-1SB] c 24 N86-28131  
Torso sizing ring construction for hard space suit  
[NASA-CASE-ARC-11616-1] c 54 N86-28618  
Elbow and knee joint for hard space suits  
[NASA-CASE-ARC-11610-1] c 54 N86-28619  
Shoulder and hip joint for hard space suits  
[NASA-CASE-ARC-11543-1] c 54 N86-28620  
Shoulder and hip joints for hard space suits and the like  
[NASA-CASE-ARC-11534-1] c 54 N86-29507  
Amine terminated bisaspartamide polymer  
[NASA-CASE-ARC-11421-2] c 27 N86-31726  
Simulator scene display evaluation device  
[NASA-CASE-ARC-11504-1] c 09 N86-32447  
Polymer of phosphonylmethyl-2,4- and -2,6-diamino benzene and polyfunctional monomer  
[NASA-CASE-ARC-11506-2] c 23 N86-32525  
Fire resistant polyamide based on 1-(diorganoxyphosphonyl)methyl-2,4- and -2,6-diamino benzene  
[NASA-CASE-ARC-11512-2] c 27 N86-32568  
Spinning disk calibration method and apparatus for laser Doppler velocimeter  
[NASA-CASE-ARC-11510-1] c 35 N86-32697

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## Dryden (Hugh L.) Flight Research Center, Edwards, Calif.

Fifth wheel  
[NASA-CASE-FRC-10081-1] c 37 N77-14477  
Window comparator  
[NASA-CASE-FRC-10090-1] c 33 N78-18308  
Wire stripper  
[NASA-CASE-FRC-10111-1] c 37 N79-10419  
Free wing assembly for an aircraft  
[NASA-CASE-FRC-10092-1] c 05 N79-12061  
Voltage regulator for battery power source  
[NASA-CASE-FRC-10116-1] c 33 N79-23345  
Air speed and attitude probe  
[NASA-CASE-FRC-11009-1] c 06 N80-18036  
Attaching of strain gages to substrates  
[NASA-CASE-FRC-10093-1] c 35 N80-20560  
Pulse transducer with artifact signal attenuator  
[NASA-CASE-FRC-11012-1] c 52 N80-23969  
Portable device for use in starting air-start-units for aircraft and having cable lead testing capability  
[NASA-CASE-FRC-10113-1] c 33 N80-26599  
System for use in conducting wake investigation for a wing in flight  
[NASA-CASE-FRC-11024-1] c 02 N80-28300  
Active notch filter network with variable notch depth, width and frequency  
[NASA-CASE-FRC-11055-1] c 33 N80-29583  
Skin friction measuring device for aircraft  
[NASA-CASE-FRC-11029-1] c 06 N81-17057  
Method for observing the features characterizing the surface of a land mass  
[NASA-CASE-FRC-11013-1] c 43 N81-17499  
Thermocouple, multiple junction reference oven  
[NASA-CASE-FRC-10112-1] c 35 N81-26431  
Electrical servo actuator bracket  
[NASA-CASE-FRC-11044-1] c 37 N81-33483  
System for providing an integrated display of instantaneous information relative to aircraft attitude, heading, altitude, and horizontal situation  
[NASA-CASE-FRC-11005-1] c 06 N82-16075  
Multiple pure tone elimination strut assembly  
[NASA-CASE-FRC-11062-1] c 71 N82-16800  
Apparatus for damping operator induced oscillations of a controlled system  
[NASA-CASE-FRC-11041-1] c 33 N82-18493  
Power converter  
[NASA-CASE-FRC-11014-1] c 33 N82-18494  
Sun sensing guidance system for high altitude aircraft  
[NASA-CASE-FRC-11052-1] c 04 N82-23231  
Superplastically formed diffusion bonded metallic structure  
[NASA-CASE-FRC-11026-1] c 24 N82-24296  
Smoothing filter for digital to analog conversion  
[NASA-CASE-FRC-11025-1] c 33 N82-24417  
Computer circuit card puller  
[NASA-CASE-FRC-11042-1] c 60 N82-24839  
Annular wing  
[NASA-CASE-FRC-11007-2] c 05 N82-26277  
Low-drag ground vehicle particularly suited for use in safely transporting livestock  
[NASA-CASE-FRC-11058-1] c 85 N82-33288  
Aircraft canopy lock  
[NASA-CASE-FRC-11065-1] c 05 N83-19737  
Adapter for mounting a microphone flush with the external surface of the skin of a pressurized aircraft  
[NASA-CASE-FRC-11072-1] c 05 N83-27975  
Aircraft body-axis rotation measurement system  
[NASA-CASE-FRC-11043-1] c 06 N83-33882

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## Electronics Research Center, Cambridge, Mass.

Method and apparatus for wavelength tuning of liquid lasers  
[NASA-CASE-ERC-10187] c 16 N69-31343  
A method for the deposition of beta-silicon carbide by isoeptaxy  
[NASA-CASE-ERC-10120] c 26 N69-33482  
Full flow with shut off and selective drainage control valve Patent application  
[NASA-CASE-ERC-10208] c 15 N70-10867  
A method for selective gold diffusion of monolithic silicon devices and/or circuits Patent application  
[NASA-CASE-ERC-10072] c 09 N70-11148  
Method and means for an improved electron beam scanning system Patent  
[NASA-CASE-ERC-10552] c 09 N71-12539  
Apparatus and method for separating a semiconductor wafer Patent  
[NASA-CASE-ERC-10138] c 26 N71-14354  
Focused image holography with extended sources Patent  
[NASA-CASE-ERC-10019] c 16 N71-15551  
Recording and reconstructing focused image holograms Patent  
[NASA-CASE-ERC-10017] c 16 N71-15567

Sorption vacuum trap Patent  
[NASA-CASE-XER-09519] c 14 N71-18483  
Voltage tunable Gunn-type microwave generator Patent  
[NASA-CASE-XER-07894] c 09 N71-18721  
Array phasing device Patent  
[NASA-CASE-ERC-10046] c 10 N71-18722  
Parametric microwave noise generator Patent  
[NASA-CASE-XER-11019] c 09 N71-23598  
Saturation current protection apparatus for saturable core transformers Patent  
[NASA-CASE-ERC-10075] c 09 N71-24800  
Repetitively pulsed, wavelength selective laser Patent  
[NASA-CASE-ERC-10178] c 16 N71-24832  
Optical mirror apparatus Patent  
[NASA-CASE-ERC-10001] c 23 N71-24868  
Unsaturating saturable core transformer Patent  
[NASA-CASE-ERC-10125] c 09 N71-24893  
Leak detector wherein a probe is monitored with ultraviolet radiation Patent  
[NASA-CASE-ERC-10034] c 15 N71-24896  
Method for detecting leaks in hermetically sealed containers Patent  
[NASA-CASE-ERC-10045] c 15 N71-24910  
Satellite aided vehicle avoidance system Patent  
[NASA-CASE-ERC-10090] c 21 N71-24948  
Transverse piezoresistance and pinch effect electromechanical transducers Patent  
[NASA-CASE-ERC-10088] c 26 N71-25490  
A solid state acoustic variable time delay line Patent  
[NASA-CASE-ERC-10032] c 10 N71-25900  
Method and means for recording and reconstructing holograms without use of a reference beam Patent  
[NASA-CASE-ERC-10020] c 16 N71-26154  
Electromechanical control actuator system Patent  
[NASA-CASE-ERC-10022] c 15 N71-26635  
Method and apparatus for detecting gross leaks Patent  
[NASA-CASE-ERC-10033] c 14 N71-26672  
Field ionization electrodes Patent  
[NASA-CASE-ERC-10013] c 09 N71-26678  
Voltage regulator Patent  
[NASA-CASE-ERC-10113] c 09 N71-27053  
A multichannel photoionization chamber for absorption analysis Patent  
[NASA-CASE-ERC-10044-1] c 14 N71-27090  
Pressure sensitive transducers Patent  
[NASA-CASE-ERC-10087] c 14 N71-27334  
Constant frequency output two stage induction machine systems Patent  
[NASA-CASE-ERC-10065] c 09 N71-27364  
Fluid power transmitting gas bearing Patent  
[NASA-CASE-ERC-10097] c 15 N71-28465  
Color television systems using a single gun color cathode ray tube Patent  
[NASA-CASE-ERC-10098] c 09 N71-28618  
Ion microprobe mass spectrometer for analyzing fluid materials Patent  
[NASA-CASE-ERC-10014] c 14 N71-28863  
Orifice gross leak tester Patent  
[NASA-CASE-ERC-10150] c 14 N71-28992  
Device for measuring light scattering wherein the measuring beam is successively reflected between a pair of parallel reflectors Patent  
[NASA-CASE-XER-11203] c 14 N71-28994  
Quasi-optical microwave component Patent  
[NASA-CASE-ERC-10011] c 07 N71-29065  
Multiple hologram recording and readout system Patent  
[NASA-CASE-ERC-10151] c 16 N71-29131  
Plasma fluidic hybrid display Patent  
[NASA-CASE-ERC-10100] c 09 N71-33519  
Optical systems having spatially invariant outputs  
[NASA-CASE-ERC-10248] c 14 N72-17323  
Method of detecting impending saturation of magnetic cores  
[NASA-CASE-ERC-10089] c 23 N72-17747  
Logarithmic function generator utilizing an exponentially varying signal in an inverse manner  
[NASA-CASE-ERC-10267] c 09 N72-23173  
Method and apparatus for limiting field emission current  
[NASA-CASE-ERC-10015-2] c 10 N72-27246

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Rocket chamber leak test fixture  
[NASA-CASE-XFR-09479] c 14 N69-27503  
Three axis controller Patent  
[NASA-CASE-XFR-00181] c 21 N70-33279  
Catalyst bed removing tool Patent  
[NASA-CASE-XFR-00811] c 15 N70-36901  
Two-axis controller Patent  
[NASA-CASE-XFR-04104] c 03 N70-42073  
Controlled visibility device for an aircraft Patent  
[NASA-CASE-XFR-04147] c 11 N71-10748

Biomedical electrode arrangement Patent [NASA-CASE-XFR-10856] c 05 N71-11189	Monopulse system with an electronic scanner [NASA-CASE-XGS-05582] c 07 N69-27480	Cartwheel satellite synchronization system Patent [NASA-CASE-XGS-05579] c 31 N71-15676
Lifting body Patent Application [NASA-CASE-FRC-10063] c 01 N71-12217	Ring counter [NASA-CASE-XGS-03095] c 09 N69-27483	Wide range linear fluxgate magnetometer Patent [NASA-CASE-XGS-01587] c 14 N71-15962
Energy management system for glider type vehicle Patent [NASA-CASE-XFR-00756] c 02 N71-13421	Retrodirective optical system [NASA-CASE-XGS-04480] c 16 N69-27491	Low friction magnetic recording tape Patent [NASA-CASE-XGS-00373] c 23 N71-15978
Quick attach mechanism Patent [NASA-CASE-XFR-05421] c 15 N71-22994	Time division multiplex system [NASA-CASE-XGS-05918] c 07 N69-39974	Method for etching copper Patent [NASA-CASE-XGS-06306] c 17 N71-16044
Heat flux measuring system Patent [NASA-CASE-XFR-03802] c 33 N71-23085	Doppler frequency spread correction device for multiplex transmissions [NASA-CASE-XGS-02749] c 07 N69-39978	Bacteriostatic conformal coating and methods of application Patent [NASA-CASE-GSC-10007] c 18 N71-16046
Threadless fastener apparatus Patent [NASA-CASE-XFR-05302] c 15 N71-23254	Alkali-metal silicate protective coating [NASA-CASE-XGS-04119] c 18 N69-39979	Serrodyne frequency converter re-entrant amplifier system Patent [NASA-CASE-XGS-01022] c 07 N71-18088
Traversing probe Patent [NASA-CASE-XFR-02007] c 12 N71-24692	Device for measuring electron-beam intensities and for subjecting materials to electron irradiation in an electron microscope [NASA-CASE-XGS-01725] c 14 N69-39982	Position location and data collection system and method Patent [NASA-CASE-GSC-10083-1] c 30 N71-16090
Layout tool Patent [NASA-CASE-FRC-10005] c 15 N71-26145	Light sensitive digital aspect sensor Patent [NASA-CASE-XGS-00359] c 14 N70-34158	Position sensing device employing misaligned magnetic field generating and detecting apparatus Patent [NASA-CASE-XGS-07514] c 23 N71-16099
Pulsed excitation voltage circuit for transducers [NASA-CASE-FRC-10036] c 09 N72-22200	Method and apparatus for determining satellite orientation utilizing spatial energy sources Patent [NASA-CASE-XGS-00486] c 21 N70-34297	Optical tracker having overlapping reticles on parallel axes Patent [NASA-CASE-XGS-05715] c 23 N71-16100
Acoustical transducer calibrating system and apparatus [NASA-CASE-FRC-10060-1] c 14 N73-27379	Binary magnetic memory device Patent [NASA-CASE-XGS-00174] c 08 N70-34743	Self-erecting reflector Patent [NASA-CASE-XGS-09190] c 31 N71-16102
Three-axis adjustable loading structure [NASA-CASE-FRC-10051-1] c 35 N74-13129	Full binary adder Patent [NASA-CASE-XGS-00889] c 08 N70-34787	Dust particle injector for hypervelocity accelerators Patent [NASA-CASE-XGS-06628] c 24 N71-16213
Terminal guidance system [NASA-CASE-FRC-10049-1] c 04 N74-13420	Ultra-long monostable multivibrator employing bistable semiconductor switch to allow charging of timing circuit Patent [NASA-CASE-XGS-00381] c 09 N70-34819	Ellipsoidal mirror reflectometer including means for averaging the radiation reflected from the sample Patent [NASA-CASE-XGS-05291] c 23 N71-16341
Full wave modulator-demodulator amplifier apparatus [NASA-CASE-FRC-10072-1] c 33 N74-14939	Space and atmospheric reentry vehicle Patent [NASA-CASE-XGS-00280] c 31 N70-37924	Angular position and velocity sensing apparatus Patent [NASA-CASE-XGS-05680] c 14 N71-17585
Rotating raster generator [NASA-CASE-FRC-10071-1] c 32 N74-20813	Variable frequency magnetic multivibrator Patent [NASA-CASE-XGS-00458] c 09 N70-38604	Apparatus for controlling the velocity of an electromechanical drive for interferometers and the like Patent [NASA-CASE-XGS-03532] c 14 N71-17627
Inflatable device for installing strain gage bridges [NASA-CASE-FRC-11068-1] c 35 N84-12443	Switching mechanism with energy storage means Patent [NASA-CASE-XGS-00473] c 03 N70-38713	Omni-directional anisotropic molecular trap Patent [NASA-CASE-XGS-00783] c 30 N71-17788
National Aeronautics and Space Administration.		
Goddard Inst. for Space Studies, New York.		
Application of luciferase assay for ATP to antimicrobial drug susceptibility [NASA-CASE-GSC-12039-1] c 51 N77-22794	Variable frequency magnetic multivibrator Patent [NASA-CASE-XGS-00131] c 09 N70-38995	Method of making tubes Patent [NASA-CASE-XGS-04175] c 15 N71-18579
Method for fabricating a mass spectrometer inlet leak [NASA-CASE-GSC-12077-1] c 35 N77-24455	Stretch de-spin mechanism Patent [NASA-CASE-XGS-00619] c 30 N70-40016	Pulse-type magnetic core memory element circuit with blocking oscillator feedback Patent [NASA-CASE-XGS-03303] c 08 N71-18595
Length controlled stabilized mode-lock ND:YAG laser [NASA-CASE-GSC-11571-1] c 36 N77-25499	Folding boom assembly Patent [NASA-CASE-XGS-00938] c 32 N70-41367	Ripple add and ripple subtract binary counters Patent [NASA-CASE-XGS-04768] c 08 N71-18602
Three phase full wave dc motor decoder [NASA-CASE-GSC-11824-1] c 33 N77-26386	Cryogenic connector for vacuum use Patent [NASA-CASE-XGS-02441] c 15 N70-41629	Computing apparatus Patent [NASA-CASE-XGS-04785] c 08 N71-18693
Gregorian all-reflective optical system [NASA-CASE-GSC-12058-1] c 74 N77-26942	Endless tape cartridge Patent [NASA-CASE-XGS-00789] c 14 N70-41847	Stepping motor control circuit Patent [NASA-CASE-GSC-10366-1] c 10 N71-18772
Opto-mechanical subsystem with temperature compensation through isothermal design [NASA-CASE-GSC-12059-1] c 35 N77-27386	Apparatus for producing three-dimensional recordings of fluorescence spectra Patent [NASA-CASE-XGS-01231] c 14 N70-41676	Traffic control system and method Patent [NASA-CASE-GSC-10087-1] c 02 N71-19287
Controlled caging and uncaging mechanism [NASA-CASE-XGS-11063-1] c 37 N77-27400	Method and apparatus for determining electromagnetic characteristics of large surface area passive reflectors Patent [NASA-CASE-XGS-02608] c 07 N70-41678	Apparatus for measuring current flow Patent [NASA-CASE-XGS-02439] c 14 N71-19431
Wideband heterodyne receiver for laser communication system [NASA-CASE-GSC-12053-1] c 32 N77-28346	Prevention of pressure build-up in electrochemical cells Patent [NASA-CASE-XGS-01419] c 03 N70-41864	Synchronous counter Patent [NASA-CASE-XGS-02440] c 08 N71-19432
Method and apparatus for producing an image from a transparent object [NASA-CASE-GSC-11989-1] c 74 N77-28932	Variable time constant smoothing circuit Patent [NASA-CASE-XGS-01983] c 10 N70-41964	Wide range data compression system Patent [NASA-CASE-XGS-02612] c 08 N71-19435
Pseudo noise code and data transmission method and apparatus [NASA-CASE-GSC-12017-1] c 32 N77-30308	Endless tape transport mechanism Patent [NASA-CASE-XGS-01223] c 07 N71-10609	Apparatus for computing square roots Patent [NASA-CASE-XGS-04788] c 08 N71-19437
Speech analyzer [NASA-CASE-GSC-11898-1] c 32 N77-30309	Reversible ring counter employing cascaded single SCR stages Patent [NASA-CASE-XGS-01473] c 09 N71-10673	Method and apparatus for battery charge control Patent [NASA-CASE-XGS-05432] c 03 N71-19438
Automatic transponder [NASA-CASE-GSC-12075-1] c 32 N77-31350	Electronic beam switching commutator Patent [NASA-CASE-XGS-01451] c 09 N71-10677	Stable amplifier having a stable quiescent point Patent [NASA-CASE-XGS-02812] c 09 N71-19466
Method of treating the surface of a glass member [NASA-CASE-GSC-12110-1] c 27 N77-32308	Sun tracker with rotatable plane-parallel plate and two photocells Patent [NASA-CASE-XGS-01159] c 21 N71-10678	Tracking antenna system Patent [NASA-CASE-GSC-10553-1] c 07 N71-19854
Flat-plate heat pipe [NASA-CASE-GSC-11998-1] c 34 N77-32413	Non-magnetic battery case Patent [NASA-CASE-XGS-00886] c 03 N71-11053	Electrochemical coulometer and method of forming same Patent [NASA-CASE-XGS-05434] c 03 N71-20491
Fluid sampling device [NASA-CASE-GSC-12143-1] c 35 N77-32456	Interconnection of solar cells Patent [NASA-CASE-XGS-01475] c 03 N71-11058	Display for binary characters Patent [NASA-CASE-XGS-04987] c 08 N71-20571
Analog to digital converter for two-dimensional radiant energy array computers [NASA-CASE-GSC-11839-3] c 80 N77-32731	Frequency shift keyed demodulator Patent [NASA-CASE-XGS-02889] c 07 N71-11282	Amplifier clamping circuit for horizon scanner Patent [NASA-CASE-XGS-01784] c 10 N71-20782
Remote sensing of vegetation and soil using microwave ellipsometry [NASA-CASE-GSC-11976-1] c 43 N78-10529	Bi-polar phase detector and corrector for split phase PCM data signals Patent [NASA-CASE-XGS-01590] c 07 N71-12392	Diversity receiving system with diversity phase lock Patent [NASA-CASE-XGS-01222] c 10 N71-20841
Memory device for two-dimensional radiant energy array computers [NASA-CASE-GSC-11839-2] c 60 N78-10709	Data processor having multiple sections activated at different times by selective power coupling to the sections Patent [NASA-CASE-XGS-04767] c 08 N71-12494	Signal detection and tracking apparatus Patent [NASA-CASE-XGS-03502] c 10 N71-20852
National Aeronautics and Space Administration.		
Goddard Space Flight Center, Greenbelt, Md.		
Regulated dc to dc converter [NASA-CASE-XGS-03429] c 03 N69-21330	Position location system and method Patent [NASA-CASE-GSC-10087-2] c 21 N71-13958	Polarization diversity monopulse tracking receiver Patent [NASA-CASE-XGS-03501] c 09 N71-20864
Apparatus for measuring swelling characteristics of membranes [NASA-CASE-XGS-03865] c 14 N69-21363	Fire resistant coating composition Patent [NASA-CASE-GSC-10072] c 18 N71-14014	System for recording and reproducing pulse code modulated data Patent [NASA-CASE-XGS-01021] c 08 N71-21042
Tumbler system to provide random motion [NASA-CASE-XGS-02437] c 15 N69-21472	Passively regulated water electrolysis rocket engine Patent [NASA-CASE-XGS-08729] c 28 N71-14044	Satellite appendage tie down cord Patent [NASA-CASE-XGS-02554] c 31 N71-21064
Automatic acquisition system for phase-lock loop [NASA-CASE-XGS-04994] c 09 N69-21543	Attitude control system Patent [NASA-CASE-XGS-04393] c 21 N71-14159	Reaction wheel scanner Patent [NASA-CASE-XGS-02629] c 14 N71-21082
Low power drain semi-conductor circuit [NASA-CASE-XGS-04999] c 09 N69-24317	Retrodirective modulator Patent [NASA-CASE-GSC-10062] c 14 N71-15605	Nonmagnetic, explosive actuated indexing device Patent [NASA-CASE-XGS-02422] c 15 N71-21529
Spacecraft battery seals [NASA-CASE-XGS-03864] c 15 N69-24320	Spacecraft attitude detection system by stellar reference Patent [NASA-CASE-XGS-03431] c 21 N71-15642	
Scanning aspect sensor employing an apertured disc and a commutator [NASA-CASE-XGS-08266] c 14 N69-27432		

Bidirectional step torque filter with zero backlash characteristic Patent			Turn on transient limiter Patent			Use of unilluminated solar cells as shunt diodes for a solar array		
[NASA-CASE-XGS-04227]	c 15	N71-21744	[NASA-CASE-GSC-10413]	c 10	N71-26531	[NASA-CASE-GSC-10344-1]	c 03	N72-27053
Conforming polisher for aspheric surface of revolution Patent			Voltage regulator with plural parallel power source sections Patent			Active tuned circuit		
[NASA-CASE-XGS-02884]	c 15	N71-22705	[NASA-CASE-GSC-10891-1]	c 10	N71-26626	[NASA-CASE-GSC-11340-1]	c 10	N72-33230
Precision thrust gage Patent			Method for generating ultra-precise angles Patent			Electric motive machine including magnetic bearing		
[NASA-CASE-XGS-02319]	c 14	N71-22965	[NASA-CASE-XGS-04173]	c 19	N71-26674	[NASA-CASE-XGS-07805]	c 15	N72-33476
Sealing device for an electrochemical cell Patent			Resettable monostable pulse generator Patent			Cosmic dust or other similar outer space particles impact location detector		
[NASA-CASE-XGS-02630]	c 03	N71-22974	[NASA-CASE-GSC-11139]	c 09	N71-27016	[NASA-CASE-GSC-11291-1]	c 25	N72-33696
Rotary bead dropper and selector for testing micrometeorite detectors Patent			Micro-pound extended range thrust stand Patent			Method and apparatus for determining the contents of contained gas samples		
[NASA-CASE-XGS-03304]	c 09	N71-22988	[NASA-CASE-GSC-10710-1]	c 28	N71-27094	[NASA-CASE-GSC-10903-1]	c 14	N73-12444
Moment of inertia test fixture Patent			Synchronous dc direct drive system Patent			System for stabilizing torque between a balloon and gondola		
[NASA-CASE-XGS-01023]	c 14	N71-22992	[NASA-CASE-GSC-10065-1]	c 10	N71-27136	[NASA-CASE-GSC-11077-1]	c 02	N73-13008
Fluid flow meter with comparator reference means Patent			Antenna array at focal plane of reflector with coupling network for beam switching Patent			Diffuse reflective coating		
[NASA-CASE-XGS-01331]	c 14	N71-22996	[NASA-CASE-GSC-10220-1]	c 07	N71-27233	[NASA-CASE-GSC-11214-1]	c 06	N73-13128
Foamed in place ceramic refractory insulating material Patent			Gravity gradient attitude control system Patent			Data processor with conditionally supplied clock signals		
[NASA-CASE-XGS-02435]	c 18	N71-22998	[NASA-CASE-GSC-10555-1]	c 21	N71-27324	[NASA-CASE-GSC-10975-1]	c 08	N73-13187
Digital telemetry system Patent			Segmented superconducting magnet for a broadband traveling wave maser Patent			Apparatus for vibrational testing of articles		
[NASA-CASE-XGS-01812]	c 07	N71-23001	[NASA-CASE-XGS-10518]	c 16	N71-28554	[NASA-CASE-GSC-11302-1]	c 14	N73-13416
Bonded elastomeric seal for electrochemical cells Patent			Millimeter wave antenna system Patent Application			Method and system for ejecting fairing sections from a rocket vehicle		
[NASA-CASE-XGS-02631]	c 03	N71-23006	[NASA-CASE-GSC-10949-1]	c 07	N71-28965	[NASA-CASE-GSC-10590-1]	c 31	N73-14853
Apparatus providing a directive field pattern and attitude sensing of a spin stabilized satellite Patent			Sampled data controller Patent			Plural beam antenna		
[NASA-CASE-XGS-02607]	c 31	N71-23009	[NASA-CASE-GSC-10554-1]	c 08	N71-29033	[NASA-CASE-GSC-11013-1]	c 09	N73-19234
Complementary regenerative switch Patent			Variable digital processor including a register for shifting and rotating bits in either direction Patent			Star tracking reticles and process for the production thereof		
[NASA-CASE-XGS-02751]	c 09	N71-23015	[NASA-CASE-GSC-10186]	c 08	N71-33110	[NASA-CASE-GSC-11188-2]	c 21	N73-19630
Solid state pulse generator with constant output width, for variable input width, in nanosecond range Patent			Combustion products generating and metering device			Delayed simultaneous release mechanism		
[NASA-CASE-XGS-03427]	c 10	N71-23029	[NASA-CASE-GSC-11095-1]	c 14	N72-10375	[NASA-CASE-GSC-10814-1]	c 03	N73-20039
Sidereal frequency generator Patent			Analog spatial maneuver computer			Doppler compensation by shifting transmitted object frequency within limits		
[NASA-CASE-XGS-02610]	c 14	N71-23174	[NASA-CASE-GSC-10880-1]	c 08	N72-11172	[NASA-CASE-GSC-10087-4]	c 07	N73-20174
Solar cell and circuit array and process for nullifying magnetic fields Patent			Helical recorder arrangement for multiple channel recording on both sides of the tape			Signal-to-noise ratio determination circuit		
[NASA-CASE-XGS-03390]	c 03	N71-23187	[NASA-CASE-GSC-10614-1]	c 09	N72-11224	[NASA-CASE-GSC-11239-1]	c 10	N73-25241
Passive synchronized spike generator with high input impedance and low output impedance and capacitor power supply Patent			Method and apparatus for eliminating coherent noise in a coherent energy imaging system without destroying spatial coherence			Nutation damper		
[NASA-CASE-XGS-03632]	c 09	N71-23311	[NASA-CASE-GSC-11133-1]	c 23	N72-11568	[NASA-CASE-GSC-11205-1]	c 15	N73-25513
Sealed electrochemical cell provided with a flexible casing Patent			Position location system and method			Low outgassing polydimethylsiloxane material and preparation thereof		
[NASA-CASE-XGS-01513]	c 03	N71-23336	[NASA-CASE-GSC-10087-3]	c 07	N72-12080	[NASA-CASE-GSC-11358-1]	c 06	N73-26100
Digitally controlled frequency synthesizer Patent			Facsimile video remodulation network			Method of detecting and counting bacteria in body fluids		
[NASA-CASE-XGS-02317]	c 09	N71-23525	[NASA-CASE-GSC-10185-1]	c 07	N72-12081	[NASA-CASE-GSC-11092-2]	c 04	N73-27052
Radio frequency coaxial high pass filter Patent			Frangible electrochemical cell			Protein sterilization method of firefly luciferase using reduced pressure and molecular sieves		
[NASA-CASE-XGS-01418]	c 09	N71-23573	[NASA-CASE-XGS-10010]	c 03	N72-15986	[NASA-CASE-GSC-10225-1]	c 06	N73-27086
Apparatus for phase stability determination Patent			Caterpillar micro positioner			Process for making RF shielded cable connector assemblies and the products formed thereby		
[NASA-CASE-XGS-01118]	c 10	N71-23662	[NASA-CASE-GSC-10780-1]	c 14	N72-16283	[NASA-CASE-GSC-11215-1]	c 09	N73-28083
Tape recorder Patent			Minimech self-deploying boom mechanism			Device for determining relative angular position between a spacecraft and a radiation emitting celestial body		
[NASA-CASE-XGS-08259]	c 14	N71-23698	[NASA-CASE-GSC-10566-1]	c 15	N72-18477	[NASA-CASE-GSC-11444-1]	c 14	N73-28490
Balance torque meter Patent			Heated porous pulp microthruster			Fastener stretcher		
[NASA-CASE-XGS-01013]	c 14	N71-23725	[NASA-CASE-GSC-10640-1]	c 28	N72-18766	[NASA-CASE-GSC-11149-1]	c 15	N73-30457
Mechanical actuator Patent			Optimum performance spacecraft solar cell system			Spacecraft attitude sensor		
[NASA-CASE-XGS-04548]	c 15	N71-24045	[NASA-CASE-GSC-10669-1]	c 03	N72-20031	[NASA-CASE-GSC-10890-1]	c 21	N73-30640
Selective plating of etched circuits without removing previous plating Patent			Monostable multivibrator			Automatic instrument for chemical processing to detect microorganism in biological samples by measuring light reactions		
[NASA-CASE-XGS-03120]	c 15	N71-24047	[NASA-CASE-GSC-10082-1]	c 10	N72-20221	[NASA-CASE-GSC-11169-2]	c 05	N73-32011
Alkali metal silicate protective coating Patent			Roll alignment detector			Star tracking reticles		
[NASA-CASE-XGS-04799]	c 18	N71-24183	[NASA-CASE-GSC-10514-1]	c 14	N72-20379	[NASA-CASE-GSC-11188-1]	c 14	N73-32320
Strain gauge measuring techniques Patent			Cosmic dust sensor			Peen plating		
[NASA-CASE-XGS-04478]	c 14	N71-24233	[NASA-CASE-GSC-10503-1]	c 14	N72-20381	[NASA-CASE-GSC-11163-1]	c 15	N73-32360
Electromagnetic polarization systems and methods Patent			Solenoid valve including guide for armature and valve member			Recorder/processor apparatus		
[NASA-CASE-GSC-10021-1]	c 09	N71-24595	[NASA-CASE-GSC-10607-1]	c 15	N72-20442	[NASA-CASE-GSC-11553-1]	c 35	N74-15831
Redundant actuating mechanism Patent			Fast response low power drain logic circuits			Method of making porous conductive supports for electrodes		
[NASA-CASE-XGS-08718]	c 15	N71-24600	[NASA-CASE-GSC-10878-1]	c 10	N72-22236	[NASA-CASE-GSC-11367-1]	c 44	N74-19692
Satellite communication system and method Patent			Trap for preventing diffusion pump backstreaming			Formation of star tracking reticles		
[NASA-CASE-GSC-10118-1]	c 07	N71-24621	[NASA-CASE-GSC-10518-1]	c 15	N72-22489	[NASA-CASE-GSC-11188-3]	c 74	N74-20008
Programmable telemetry system Patent			Resistance soldering apparatus			Radiation hardening of MOS devices by boron		
[NASA-CASE-GSC-10131-1]	c 07	N71-24624	[NASA-CASE-GSC-10913]	c 15	N72-22491	[NASA-CASE-GSC-11425-1]	c 76	N74-20329
Coulometer and third electrode battery charging circuit Patent			Optical system support apparatus			Amplitude steered array		
[NASA-CASE-GSC-10487-1]	c 03	N71-24719	[NASA-CASE-XER-07896-2]	c 23	N72-22673	[NASA-CASE-GSC-11446-1]	c 33	N74-20860
Electronic scanning of 2-channel monopulse patterns Patent			SCR lamp driver			Rotary solenoid shutter drive assembly and rotary inertia damper and stop plate assembly		
[NASA-CASE-GSC-10299-1]	c 09	N71-24804	[NASA-CASE-GSC-10221-1]	c 09	N72-23171	[NASA-CASE-GSC-11560-1]	c 33	N74-20861
Annular slit colloid thruster Patent			Potassium silicate zinc coatings			Ultra-stable oscillator with complementary transistors		
[NASA-CASE-GSC-10709-1]	c 28	N71-25213	[NASA-CASE-GSC-10361-1]	c 18	N72-23581	[NASA-CASE-GSC-11513-1]	c 33	N74-20862
Voltage to frequency converter Patent			Synchronous orbit battery cycler			High efficiency multifrequency feed		
[NASA-CASE-GSC-10022-1]	c 10	N71-25882	[NASA-CASE-GSC-11211-1]	c 03	N72-25020	[NASA-CASE-GSC-11909]	c 32	N74-20863
Direct current motor with stationary armature and field Patent			Flavin coenzyme assay			Turnstile slot antenna		
[NASA-CASE-XGS-05290]	c 09	N71-25999	[NASA-CASE-GSC-10565-1]	c 06	N72-25149	[NASA-CASE-GSC-11428-1]	c 32	N74-20864
Buck boost voltage regulation circuit Patent			Location identification system			Method and apparatus for checking fire detectors		
[NASA-CASE-GSC-10735-1]	c 10	N71-26085	[NASA-CASE-ERC-10324]	c 07	N72-25173	[NASA-CASE-GSC-11600-1]	c 35	N74-21019
Adaptive system and method for signal generation Patent			A dc to ac to dc converter having transistor synchronous rectifiers			Long range laser traversing system		
[NASA-CASE-GSC-11367]	c 10	N71-26374	[NASA-CASE-GSC-11126-1]	c 09	N72-25253	[NASA-CASE-GSC-11262-1]	c 36	N74-21091
Control apparatus for applying pulses of selectively predetermined duration to a sequence of loads Patent			Tungsten contacts on silicon substrates			Method and apparatus for optically monitoring the angular position of a rotating mirror		
[NASA-CASE-XGS-04224]	c 10	N71-26418	[NASA-CASE-GSC-10695-1]	c 09	N72-25259	[NASA-CASE-GSC-11353-1]	c 74	N74-21304
			Bacterial contamination monitor			Image tube		
			[NASA-CASE-GSC-10879-1]	c 14	N72-25413	[NASA-CASE-GSC-11602-1]	c 33	N74-21850
			Honeycomb panels formed of minimal surface periodic tubule layers					
			[NASA-CASE-ERC-10364]	c 18	N72-25540			
			Honeycomb core structures of minimal surface tubule sections					
			[NASA-CASE-ERC-10363]	c 18	N72-25541			
			Gunn-type solid state devices					
			[NASA-CASE-XER-07895]	c 26	N72-25679			

Apparatus for controlling the temperature of balloon-borne equipment [NASA-CASE-GSC-11620-1]	c 34	N74-23039	Method and apparatus for neutralizing potentials induced on spacecraft surfaces [NASA-CASE-GSC-11963-1]	c 33	N77-10429	Fluid pressure balanced seal [NASA-CASE-XGS-01286-1]	c 37	N79-33469
Coaxial anode wire for gas radiation counters [NASA-CASE-GSC-11492-1]	c 35	N74-26949	Inrush current limiter [NASA-CASE-GSC-11789-1]	c 33	N77-14333	Antenna deployment mechanism for use with a spacecraft [NASA-CASE-GSC-12331-1]	c 18	N80-14183
Arterial pulse wave pressure transducer [NASA-CASE-GSC-11531-1]	c 52	N74-27566	Linear phase demodulator including a phase locked loop with auxiliary feedback loop [NASA-CASE-GSC-12018-1]	c 33	N77-14334	Laser apparatus [NASA-CASE-GSC-12237-1]	c 36	N80-14384
Heat flow calorimeter [NASA-CASE-GSC-11434-1]	c 34	N74-27859	Reel safety brake [NASA-CASE-GSC-11980-1]	c 37	N77-14479	Coupling device for moving vehicles [NASA-CASE-GSC-12322-1]	c 37	N80-14398
Air conditioning system and component therefore distributing air flow from opposite directions [NASA-CASE-GSC-11445-1]	c 31	N74-27902	Two-dimensional radiant energy array computers and computing devices [NASA-CASE-GSC-11839-1]	c 60	N77-14751	Voltage feed through apparatus having reduced partial discharge [NASA-CASE-GSC-12347-1]	c 33	N80-18286
Passive dual spin misalignment compensators [NASA-CASE-GSC-11479-1]	c 35	N74-28097	Magnetic bearing system [NASA-CASE-GSC-11978-1]	c 37	N77-17464	Distributed-switch Dicke radiometers [NASA-CASE-GSC-12219-1]	c 35	N80-18359
Star scanner [NASA-CASE-GSC-11569-1]	c 89	N74-30886	Method and apparatus for measuring web material wound on a reel [NASA-CASE-GSC-11902-1]	c 38	N77-17495	Method and apparatus for slicing crystals [NASA-CASE-GSC-12291-1]	c 76	N80-18951
Millimeter wave pumped parametric amplifier [NASA-CASE-GSC-11817-1]	c 33	N74-32660	Cyclical bi-directional rotary actuator [NASA-CASE-GSC-11883-1]	c 37	N77-19458	Diffraction grating configuration for X-ray and ultraviolet focusing [NASA-CASE-GSC-12357-1]	c 74	N80-21140
Structural heat pipe [NASA-CASE-GSC-11619-1]	c 34	N75-12222	The 2 deg/90 deg laboratory scattering photometer [NASA-CASE-GSC-12088-1]	c 74	N78-13874	Active nutation controller [NASA-CASE-GSC-12273-1]	c 35	N80-21719
Remote platform power conserving system [NASA-CASE-GSC-11182-1]	c 15	N75-13007	Transformer regulated self-stabilizing chopper [NASA-CASE-XGS-09186]	c 33	N78-17295	Method and apparatus for holding two separate metal pieces together for welding [NASA-CASE-GSC-12318-1]	c 37	N80-23655
Bonding of sapphire to sapphire by eutectic mixture of aluminum oxide and zirconium oxide [NASA-CASE-GSC-11577-1]	c 37	N75-15992	Shunt regulation electric power system [NASA-CASE-GSC-10135]	c 33	N78-17296	Method of forming a sharp edge on an optical device [NASA-CASE-GSC-12348-1]	c 74	N80-24149
Magnetic bearing [NASA-CASE-GSC-11079-1]	c 37	N75-18574	Binary to binary coded decimal converter [NASA-CASE-GSC-12044-1]	c 60	N78-17691	Scannable beam forming interferometer antenna array system [NASA-CASE-GSC-12365-1]	c 32	N80-28578
Dish antenna having switchable beamwidth [NASA-CASE-GSC-11760-1]	c 33	N75-19516	Magnifying image intensifier [NASA-CASE-GSC-12010-1]	c 74	N78-18905	Apparatus for supplying conditioned air at a substantially constant temperature and humidity [NASA-CASE-GSC-12191-1]	c 31	N80-32583
X-Y alphanumeric character generator for oscilloscopes [NASA-CASE-GSC-11582-1]	c 33	N75-19517	Energy storage apparatus [NASA-CASE-GSC-12030-1]	c 44	N78-24608	Belt for transmitting power from a cogged driving member to a cogged driven member [NASA-CASE-GSC-12289-1]	c 37	N80-32717
Controllable high voltage source having fast settling time [NASA-CASE-GSC-11844-1]	c 33	N75-19522	Process for utilizing low-cost graphite substrates for polycrystalline solar cells [NASA-CASE-GSC-12022-2]	c 44	N78-24609	System for a displaying at a remote station data generated at a central station and for powering the remote station from the central station [NASA-CASE-GSC-12411-1]	c 33	N81-14221
Dually mode locked Nd:YAG laser [NASA-CASE-GSC-11746-1]	c 36	N75-19654	Actuator mechanism [NASA-CASE-GSC-11883-2]	c 37	N78-31426	Device for coupling a first vehicle to a second vehicle [NASA-CASE-GSC-12429-1]	c 37	N81-14320
Self-regulating proportionally controlled heating apparatus and technique [NASA-CASE-GSC-11752-1]	c 77	N75-20140	Quadrature demodulation [NASA-CASE-GSC-12137-1]	c 33	N78-32338	Safety shield for vacuum/pressure chamber viewing port [NASA-CASE-GSC-12513-1]	c 31	N81-19343
Low speed phaselock speed control system [NASA-CASE-GSC-11127-1]	c 09	N75-24758	Logarithmic circuit with wide dynamic range [NASA-CASE-GSC-12145-1]	c 33	N78-32339	Buck/boost regulator [NASA-CASE-GSC-12360-1]	c 33	N81-19392
Modulator for tone and binary signals [NASA-CASE-GSC-11743-1]	c 32	N75-24981	Wide power range microwave feedback controller [NASA-CASE-GSC-12146-1]	c 33	N78-32340	Geodetic distance measuring apparatus [NASA-CASE-GSC-12609-1]	c 36	N81-22344
Digital phase-locked loop [NASA-CASE-GSC-11623-1]	c 33	N75-25040	Method and apparatus for splitting a beam of energy [NASA-CASE-GSC-12083-1]	c 73	N78-32848	Fluorescent radiation converter [NASA-CASE-GSC-12528-1]	c 74	N81-24900
Radiation hardening of MOS devices by boron [NASA-CASE-GSC-11425-2]	c 76	N75-25730	Time domain phase measuring apparatus [NASA-CASE-GSC-12228-1]	c 33	N79-10338	Portable appliance security apparatus [NASA-CASE-GSC-12399-1]	c 33	N81-25299
Correlation type phase detector [NASA-CASE-GSC-11744-1]	c 33	N75-26243	System for and method of freezing biological tissue [NASA-CASE-GSC-12173-1]	c 51	N79-10694	Locking mechanism for orthopedic braces [NASA-CASE-GSC-12082-2]	c 52	N81-25661
Process for making sheets with parallel pores of uniform size [NASA-CASE-GSC-10984-1]	c 37	N75-26371	Systems and methods for determining radio frequency interference [NASA-CASE-GSC-12150-1]	c 32	N79-11265	Method of making V-MOS field effect transistors utilizing a two-step anisotropic etching and ion implantation [NASA-CASE-GSC-12515-1]	c 33	N81-26360
Impact position detector for outer space particles [NASA-CASE-GSC-11829-1]	c 35	N75-27331	Complementary DMOS-VMOS integrated circuit structure [NASA-CASE-GSC-12190-1]	c 33	N79-12321	Apparatus and method for determining the position of a radiant energy source [NASA-CASE-GSC-12147-1]	c 32	N81-27341
Single frequency, two feed dish antenna having switchable beamwidth [NASA-CASE-GSC-11968-1]	c 32	N76-15329	Electrically conductive thermal control coatings [NASA-CASE-GSC-12207-1]	c 24	N79-14156	Interleaving device [NASA-CASE-GSC-12111-2]	c 33	N81-29342
Micrometeoroid velocity and trajectory analyzer [NASA-CASE-GSC-11892-1]	c 35	N76-15433	External bulb variable volume maser [NASA-CASE-GSC-12334-1]	c 36	N79-14362	Time delay and integration detectors using charge transfer devices [NASA-CASE-GSC-12324-1]	c 33	N81-33403
Atomic standard with variable storage volume [NASA-CASE-GSC-11895-1]	c 35	N76-15436	Determination of antimicrobial susceptibilities on infected urines without isolation [NASA-CASE-GSC-12046-1]	c 52	N79-14750	Stirling cycle cryogenic cooler [NASA-CASE-GSC-12697-1]	c 31	N82-11312
High voltage distributor [NASA-CASE-GSC-11849-1]	c 33	N76-16332	Partial polarizer filter [NASA-CASE-GSC-12225-1]	c 74	N79-14891	Scanner [NASA-CASE-GSC-12032-2]	c 43	N82-13465
Moving particle composition analyzer [NASA-CASE-GSC-11889-1]	c 35	N76-16393	Thermal compensator for closed-cycle helium refrigerator [NASA-CASE-GSC-12168-1]	c 31	N79-17029	Microwave switching power divider [NASA-CASE-GSC-12420-1]	c 33	N82-16340
Variable beamwidth antenna [NASA-CASE-GSC-11862-1]	c 32	N76-18295	Solar cell module assembly jig [NASA-CASE-XGS-00829-1]	c 44	N79-19447	Laser measuring system for incremental assemblies [NASA-CASE-GSC-12321-1]	c 36	N82-16396
Automatic character skew and spacing checking network [NASA-CASE-GSC-11925-1]	c 33	N76-18353	System for synchronizing synthesizers of communication systems [NASA-CASE-GSC-12148-1]	c 32	N79-20296	Memory-based frame synchronizer [NASA-CASE-GSC-12430-1]	c 60	N82-16747
Axially and radially controllable magnetic bearing [NASA-CASE-GSC-11551-1]	c 37	N76-18459	Rotary electric device [NASA-CASE-GSC-12138-1]	c 33	N79-20314	Low thrust monopropellant engine [NASA-CASE-GSC-12194-2]	c 20	N82-18314
Apparatus for simulating optical transmission links [NASA-CASE-GSC-11877-1]	c 74	N76-18913	Low intensity X-ray and gamma-ray imaging device [NASA-CASE-GSC-12263-1]	c 74	N79-20857	Cervix-to-rectum measuring device in a radiation applicator for use in the treatment of cervical cancer [NASA-CASE-GSC-12081-2]	c 52	N82-22875
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Locking mechanism for orthopedic braces [NASA-CASE-GSC-12082-1]	c 54	N76-22914	Microwave dichroic plate [NASA-CASE-GSC-12171-1]	c 33	N79-28416	Linear magnetic motor/generator [NASA-CASE-GSC-12518-1]	c 33	N82-24421
Ultraviolet light reflective coating [NASA-CASE-GSC-11786-1]	c 24	N76-24363	Shock isolator for operating a diode laser on a closed-cycle refrigerator [NASA-CASE-GSC-12297-1]	c 37	N79-28549	Non-contacting power transfer device [NASA-CASE-GSC-12595-1]	c 33	N82-24422
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Memory-based parallel data output controller		
[NASA-CASE-GSC-12447-2]	c 60	N84-28491
Imaging X-ray spectrometer		
[NASA-CASE-GSC-12682-1]	c 35	N84-33765
Apparatus for disintegrating kidney stones		
[NASA-CASE-GSC-12652-1]	c 52	N84-34913
Improved legislated emergency locating transmitters and emergency position indicating radio beacons		
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Portable pallet weighing apparatus		
[NASA-CASE-GSC-12789-1]	c 35	N85-20294
Linear magnetic bearings		
[NASA-CASE-GSC-12582-2]	c 37	N85-20337
Wide-angle flat field telescope		
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[NASA-CASE-GSC-12788-1]	c 33	N85-29145
High voltage isolation transformer		
[NASA-CASE-GSC-12817-1]	c 33	N85-29146
High voltage power supply		
[NASA-CASE-GSC-12818-1]	c 33	N85-29147
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Three-dimensional and tomographic imaging device for X-ray and gamma-ray emitting objects		
[NASA-CASE-GSC-12851-1]	c 35	N85-30281
JFET reflection oscillator		
[NASA-CASE-GSC-12555-1]	c 33	N86-19515
Temperature averaging thermal probe		
[NASA-CASE-GSC-12795-1]	c 35	N86-19580
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GaAs Schottky barrier photo-responsive device and method of fabrication		
[NASA-CASE-GSC-12816-1]	c 76	N86-20150
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[NASA-CASE-GSC-12970-1]	c 08	N86-20396
Automatic oscillator frequency control system		
[NASA-CASE-GSC-12804-1]	c 33	N86-20668
Rotatable electric cable connecting system		
[NASA-CASE-GSC-12899-1]	c 33	N86-20669
Programmable electronic synthesized capacitance		
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Method of fabricating an imaging X-ray spectrometer		
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Radial and torsionally controlled magnetic bearing		
[NASA-CASE-GSC-12957-1]	c 37	N86-20804
Optical multiple sample vacuum integrating sphere		
[NASA-CASE-GSC-12849-1]	c 74	N86-26190
Wide-angle flat field telescope		
[NASA-CASE-GSC-12825-1]	c 74	N86-28732
Multispectral linear array multiband selection device		
[NASA-CASE-GSC-12911-1]	c 74	N86-29650
Optical distance measuring instrument		
[NASA-CASE-GSC-12761-1]	c 74	N86-32266
Method of coating a substrate with a rapidly solidified metal		
[NASA-CASE-GSC-12880-1]	c 26	N86-32550
Cellular thermosetting fluoropolymers and process for making them		
[NASA-CASE-GSC-13008-1]	c 27	N86-32570
Temperature sensitive oscillator		
[NASA-CASE-GSC-12958-1]	c 33	N86-32624
<b>National Aeronautics and Space Administration. John F. Kennedy Space Center, Cocoa Beach, Fla.</b>		
Device for determining the accuracy of the flare on a flared tube		
[NASA-CASE-XKS-03495]	c 14	N69-39785
Quick attach and release fluid coupling assembly		
Patent		
[NASA-CASE-XKS-01985]	c 15	N71-10782
Parasitic probe antenna		
[NASA-CASE-XKS-09348]	c 09	N71-13521
Electronic checkout system for space vehicles		
[NASA-CASE-XKS-08012-2]	c 31	N71-15566
Apparatus for tensile testing		
[NASA-CASE-XKS-06250]	c 14	N71-15600
Weatherproof helix antenna		
[NASA-CASE-XKS-08485]	c 07	N71-19493
Valve seat with resilient support member		
[NASA-CASE-XKS-02582]	c 15	N71-21234
Diode and protection fuse unit		
[NASA-CASE-XKS-03381]	c 09	N71-22790

Optical monitor panel Patent [NASA-CASE-XKS-03509]	c 14	N71-23175
Separation simulator Patent [NASA-CASE-XKS-04631]	c 10	N71-23663
Controlled release device Patent [NASA-CASE-XKS-03338]	c 15	N71-24043
Phonocardiogram simulator Patent [NASA-CASE-XKS-10804]	c 05	N71-24606
VHF/UHF parasitic probe antenna Patent [NASA-CASE-XKS-09340]	c 07	N71-24614
BCD to decimal decoder Patent [NASA-CASE-XKS-06167]	c 08	N71-24890
Flammability test chamber Patent [NASA-CASE-KSC-10126]	c 11	N71-24985
Video sync processor Patent [NASA-CASE-KSC-10002]	c 10	N71-25865
Weld preparation machine Patent [NASA-CASE-XKS-07953]	c 15	N71-26134
Validation device for spacecraft checkout equipment Patent [NASA-CASE-XKS-10543]	c 07	N71-26292
Internal work light Patent [NASA-CASE-XKS-05932]	c 09	N71-26787
Emergency escape system Patent [NASA-CASE-XKS-07814]	c 15	N71-27067
Voltage dropout sensor Patent [NASA-CASE-KSC-10020]	c 10	N71-27338
Autoignition test cell Patent [NASA-CASE-KSC-10198]	c 11	N71-28629
Protective suit having an audio transceiver Patent [NASA-CASE-KSC-10164]	c 07	N71-33108
Ripple indicator [NASA-CASE-KSC-10162]	c 09	N72-11225
High speed photo-optical time recording [NASA-CASE-KSC-10294]	c 14	N72-18411
High speed direct binary-to-binary coded decimal converter [NASA-CASE-KSC-10326]	c 08	N72-21197
Automatic frequency control loop including synchronous switching circuits [NASA-CASE-KSC-10393]	c 09	N72-21247
Zero gravity shadow shield aligner [NASA-CASE-KSC-10622-1]	c 31	N72-21893
Universal environment package with sectional component housing [NASA-CASE-KSC-10031]	c 15	N72-22486
Buffered analog converter [NASA-CASE-KSC-10397]	c 08	N72-25206
Lamp modulator [NASA-CASE-KSC-10565]	c 09	N72-25250
Cable stabilizer for open shaft cable operated elevators [NASA-CASE-KSC-10513]	c 15	N72-25453
Pressurized lighting system [NASA-CASE-KSC-10644]	c 09	N72-27227
High speed direct binary to binary coded decimal converter and scaler [NASA-CASE-KSC-10595]	c 08	N73-12176
Geysering inhibitor for vertical cryogenic transfer pipe [NASA-CASE-KSC-10615]	c 15	N73-12486
Electronic video editor [NASA-CASE-KSC-10003]	c 10	N73-13235
Collapsible high gain antenna [NASA-CASE-KSC-10392]	c 07	N73-26117
Floating baffle to improve efficiency of liquid transfer from tanks [NASA-CASE-KSC-10639]	c 15	N73-26472
Zero gravity liquid transfer screen [NASA-CASE-KSC-10626]	c 14	N73-27378
Television multiplexing system [NASA-CASE-KSC-10654-1]	c 07	N73-30115
Lightning tracking system [NASA-CASE-KSC-10729-1]	c 09	N73-32110
Rocket borne instrument to measure electric fields inside electrified clouds [NASA-CASE-KSC-10730-1]	c 14	N73-32318
Electric field measuring and display system [NASA-CASE-KSC-10731-1]	c 33	N74-27862
Digital servo controller [NASA-CASE-KSC-10769-1]	c 33	N74-29556
Signal conditioner test set [NASA-CASE-KSC-10750-1]	c 35	N75-12270
Variable resistance constant tension and lubrication device [NASA-CASE-KSC-10723-1]	c 37	N75-13265
Voltage monitoring system [NASA-CASE-KSC-10736-1]	c 33	N75-19521
Lightning current measuring systems [NASA-CASE-KSC-10807-1]	c 33	N75-26246
Dual digital video switcher [NASA-CASE-KSC-10782-1]	c 33	N75-30431
Compact bi-phase pulse coded modulation decoder [NASA-CASE-KSC-10834-1]	c 33	N76-14371
Percutaneous connector device [NASA-CASE-KSC-10849-1]	c 52	N77-14738

Magnetic electrical connectors for biomedical percutaneous implants			Bonded solid lubricant coating Patent			Tension measurement device Patent		
[NASA-CASE-KSC-11030-1]	c 52	N77-25772	[NASA-CASE-XMS-00259]	c 18	N70-36400	[NASA-CASE-XMS-04545]	c 15	N71-22878
Rotational joint assembly for the prosthetic leg			Life preserver Patent			Amplitude modulated laser transmitter Patent		
[NASA-CASE-KSC-11004-1]	c 54	N77-30749	[NASA-CASE-XMS-00864]	c 05	N70-36493	[NASA-CASE-XMS-04269]	c 16	N71-22895
Fiber optic multiplex optical transmission system			Resuscitation apparatus Patent			Digital cardiometer system Patent		
[NASA-CASE-KSC-11047-1]	c 74	N78-14889	[NASA-CASE-XMS-01115]	c 05	N70-39922	[NASA-CASE-XMS-02399]	c 05	N71-22896
Microcomputerized electric field meter diagnostic and calibration system			Inflatable radar reflector unit Patent			Phonocardiograph transducer Patent		
[NASA-CASE-KSC-11035-1]	c 35	N78-28411	[NASA-CASE-XMS-00893]	c 07	N70-40063	[NASA-CASE-XMS-05365]	c 14	N71-22993
Ocean thermal plant			Measuring device Patent			Multiple environment materials test chamber having a multiple port X-ray tube for irradiating a plurality of samples Patent		
[NASA-CASE-KSC-11034-1]	c 44	N78-32542	[NASA-CASE-XMS-01546]	c 14	N70-40233	[NASA-CASE-XMS-02930]	c 11	N71-23042
Lightning current waveform measuring system			Liquid-gas separator for zero gravity environment Patent			Soft frame adjustable eyeglasses Patent		
[NASA-CASE-KSC-11018-1]	c 33	N79-10337	[NASA-CASE-XMS-01492]	c 05	N70-41297	[NASA-CASE-XMS-06064]	c 05	N71-23096
Remote lightning monitor system			Instrument for use in performing a controlled Valsalva maneuver Patent			Blood pressure measuring system for separating and separately recording dc signal and an ac signal Patent		
[NASA-CASE-KSC-11031-1]	c 33	N79-11315	[NASA-CASE-XMS-01615]	c 05	N70-41329	[NASA-CASE-XMS-06061]	c 05	N71-23317
Illumination control apparatus for compensating solar light			Radial module space station Patent			Signal ratio system utilizing voltage controlled oscillators Patent		
[NASA-CASE-KSC-11010-1]	c 74	N79-12890	[NASA-CASE-XMS-01906]	c 31	N70-41373	[NASA-CASE-XMF-04387]	c 09	N71-23545
Lightning current detector			Hypersonic reentry vehicle Patent			Winch having cable position and load indicators Patent		
[NASA-CASE-KSC-11057-1]	c 33	N79-14305	[NASA-CASE-XMS-04142]	c 31	N70-41631	[NASA-CASE-MSC-12052-1]	c 15	N71-24599
Apparatus including a plurality of spaced transformers for locating short circuits in cables			Angular accelerometer Patent			Radar antenna system for acquisition and tracking Patent		
[NASA-CASE-KSC-10899-1]	c 33	N79-18193	[NASA-CASE-XMS-05936]	c 14	N70-41682	[NASA-CASE-XMS-09610]	c 07	N71-24625
Digital automatic gain amplifier			Indexed keyed connection Patent			Extravehicular tunnel suit system Patent		
[NASA-CASE-KSC-11008-1]	c 33	N79-22373	[NASA-CASE-XMS-02532]	c 15	N70-41808	[NASA-CASE-MSC-12243-1]	c 05	N71-24728
Telephone multiline signaling using common signal pair			Discrete local altitude sensing device Patent			Broadband modified turnstile antenna Patent		
[NASA-CASE-KSC-11023-1]	c 32	N79-23310	[NASA-CASE-XMS-03792]	c 14	N70-41812	[NASA-CASE-MSC-12209]	c 09	N71-24842
Prosthesis coupling			Cryogenic storage system Patent			Quick release hook tape Patent		
[NASA-CASE-KSC-11069-1]	c 52	N79-26772	[NASA-CASE-XMS-04390]	c 31	N70-41871	[NASA-CASE-XMS-10660-1]	c 15	N71-25975
Fire extinguishing apparatus having a slidable mass for a penetrator nozzle			Mass measuring system Patent			Plated electrodes Patent		
[NASA-CASE-KSC-11064-1]	c 31	N81-14137	[NASA-CASE-XMS-03371]	c 05	N70-42000	[NASA-CASE-XMS-04213-1]	c 09	N71-26002
System for sterilizing objects			Line cutter Patent			Audio signal processor Patent		
[NASA-CASE-KSC-11085-1]	c 54	N81-24724	[NASA-CASE-XMS-04072]	c 15	N70-42017	[NASA-CASE-MSC-12223-1]	c 07	N71-26181
Common data buffer system			Transpirationally cooled heat ablation system Patent			Fabric for micrometeoroid protection garment Patent		
[NASA-CASE-KSC-11048-1]	c 62	N81-24779	[NASA-CASE-XMS-02677]	c 31	N70-42075	[NASA-CASE-MSC-12109]	c 18	N71-26285
System and method for refurbishing and processing parachutes			Voltage-current characteristic simulator Patent			Antenna array phase quadrature tracking system Patent		
[NASA-CASE-KSC-11042-2]	c 02	N81-26073	[NASA-CASE-XMS-01554]	c 10	N71-10578	[NASA-CASE-MSC-12205-1]	c 07	N71-27056
Decommutator patchboard verifier			Training vehicle for controlling attitude Patent			Radiometric temperature reference Patent		
[NASA-CASE-KSC-11065-1]	c 33	N81-26359	[NASA-CASE-XMS-02977]	c 11	N71-10746	[NASA-CASE-MSC-13276-1]	c 14	N71-27058
Automatic flowmeter calibration system			Gravity stabilized flying vehicle Patent			Pneumatic amplifier Patent		
[NASA-CASE-KSC-11076-1]	c 34	N81-26402	[NASA-CASE-MSC-12111-1]	c 02	N71-11039	[NASA-CASE-MSC-12121-1]	c 15	N71-27147
Lightning discharge identification system			Helmet assembly and latch means therefor Patent			Orbital escape device Patent		
[NASA-CASE-KSC-11099-1]	c 47	N82-24779	[NASA-CASE-XMS-04935]	c 05	N71-11190	[NASA-CASE-XMS-06162]	c 31	N71-28851
Method for refurbishing and processing parachutes			Pressure suit tie-down mechanism Patent			[NASA-CASE-XMS-10993]	c 15	N71-28936
[NASA-CASE-KSC-11042-1]	c 09	N82-29330	[NASA-CASE-XMS-00784]	c 05	N71-12335	Ion-exchange membrane with platinum electrode assembly Patent		
Method for repair of thin glass coatings			Hand-held self-manuevering unit Patent			[NASA-CASE-XMS-02063]	c 03	N71-29044
[NASA-CASE-KSC-11097-1]	c 27	N82-33520	[NASA-CASE-XMS-05304]	c 05	N71-12336	Color television system		
Serial data correlator/code translator			Pressure garment joint Patent			[NASA-CASE-MSC-12146-1]	c 07	N72-17109
[NASA-CASE-KSC-11025-1]	c 32	N83-13323	[NASA-CASE-XMS-09636]	c 05	N71-12344	Current dependent filter inductance		
Fiber optic crossbar switch for automatically patching optical signals			Emergency escape system Patent			[NASA-CASE-ERC-10139]	c 09	N72-17154
[NASA-CASE-KSC-11104-1]	c 74	N83-29032	[NASA-CASE-MSC-12086-1]	c 05	N71-12345	Low onset rate energy absorber		
Automatic level control circuit			Dynamic Doppler simulator Patent			[NASA-CASE-MSC-12279]	c 15	N72-17450
[NASA-CASE-KSC-11170-1]	c 33	N83-36356	[NASA-CASE-XMS-05454-1]	c 07	N71-12391	Stand-off type ablative heat shield		
Liquid hydrogen polygeneration system and process			Electrical load protection device Patent			[NASA-CASE-MSC-12143-1]	c 33	N72-17947
[NASA-CASE-KSC-11304-1]	c 28	N84-29017	[NASA-CASE-MSC-12135-1]	c 09	N71-12526	Optical range finder having nonoverlapping complete images		
Inflight IFR procedures simulator			High voltage pulse generator Patent			[NASA-CASE-MSC-12105-1]	c 14	N72-21409
[NASA-CASE-KSC-11218-1]	c 09	N85-19990	[NASA-CASE-MSC-12178-1]	c 09	N71-13518	Open type urine receptacle		
Video processor for air traffic control beacon system			Process for conditioning tanned sharkskin and articles made therefrom Patent			[NASA-CASE-MSC-12324-1]	c 05	N72-22093
[NASA-CASE-KSC-11155-1]	c 04	N86-19304	[NASA-CASE-XMS-09691-1]	c 18	N71-15545	Family of frequency to amplitude converters		
Personnel emergency carrier vehicle			Ablation structures Patent			[NASA-CASE-MSC-12395]	c 09	N72-25257
[NASA-CASE-KSC-11282-1]	c 85	N86-22452	[NASA-CASE-XMS-01816]	c 33	N71-15623	Foldable construction block		
Liquid hydrogen polygeneration system and process			Fluid power transmission Patent			[NASA-CASE-MSC-12233-1]	c 15	N72-25454
[NASA-CASE-KSC-11304-2]	c 28	N86-23744	[NASA-CASE-XMS-01445]	c 12	N71-16031	Method and apparatus for detecting surface ions on silicon diodes and transistors		
Method and apparatus for operating on compressed PCM voice data			Spacecraft radiator cover Patent			[NASA-CASE-ERC-10325]	c 15	N72-25457
[NASA-CASE-KSC-11285-1]	c 32	N86-27513	[NASA-CASE-MSC-12049]	c 31	N71-16080	Scientific experiment flexible mount		
<b>National Aeronautics and Space Administration.</b>			Method of improving heat transfer characteristics in a nucleate boiling process Patent			[NASA-CASE-MSC-12372-1]	c 31	N72-25842
<b>Lyndon B. Johnson Space Center, Houston, Tex.</b>			[NASA-CASE-XMS-04268]	c 33	N71-16277	Burn rate testing apparatus		
Coupling device			Heated element fluid flow sensor Patent			[NASA-CASE-XMS-09890]	c 33	N72-25913
[NASA-CASE-XMS-07846-1]	c 09	N69-21927	[NASA-CASE-MSC-12084-1]	c 12	N71-17569	System for improving signal-to-noise ratio of a communication signal		
Flow test device			Biological isolation garment Patent			[NASA-CASE-MSC-12259-2]	c 07	N72-33146
[NASA-CASE-XMS-04917]	c 14	N69-24257	[NASA-CASE-MSC-12206-1]	c 05	N71-17599	Altitude measuring system		
Visual target for retrofire attitude control			Metal valve pinhole with encapsulated elastomeric body Patent			[NASA-CASE-ERC-10412-1]	c 09	N73-12211
[NASA-CASE-XMS-12158-1]	c 31	N69-27499	[NASA-CASE-MSC-12116-1]	c 15	N71-17648	A method of delivering a vehicle to earth orbit and returning the reusable portion thereof to earth		
System for monitoring signal amplitude ranges			Method for forming plastic materials Patent			[NASA-CASE-MSC-12391]	c 30	N73-12884
[NASA-CASE-XMS-04061-1]	c 09	N69-39885	[NASA-CASE-XMS-05516]	c 15	N71-17803	Multispectral imaging system		
Amplifier drift tester			Flexible blade antenna Patent			[NASA-CASE-MSC-12404-1]	c 23	N73-13661
[NASA-CASE-XMS-05562-1]	c 09	N69-39986	[NASA-CASE-MSC-12101]	c 09	N71-18720	Foldable construction block		
System for improving signal-to-noise ratio of a communication signal Patent Application			Space suit heat exchanger Patent			[NASA-CASE-MSC-12233-2]	c 32	N73-13921
[NASA-CASE-MSC-12259-1]	c 07	N70-12616	[NASA-CASE-XMS-08571]	c 05	N71-19439	Space shuttle vehicle and system		
Two-step rocket engine bipropellant valve Patent			Light intensity modulator controller Patent			[NASA-CASE-MSC-12433]	c 31	N73-14854
[NASA-CASE-XMS-04890-1]	c 15	N70-22192	[NASA-CASE-XMS-04300]	c 09	N71-19479	Apparatus for statistical time-series analysis of electrical signals		
Heat shield Patent			Solar optical telescope dome control system Patent			[NASA-CASE-MSC-12428-1]	c 10	N73-25240
[NASA-CASE-XMS-00486]	c 33	N70-33344	[NASA-CASE-MSC-10966]	c 14	N71-19568	Life raft stabilizer		
Life raft Patent			Subgravity simulator Patent			[NASA-CASE-MSC-12393-1]	c 02	N73-26006
[NASA-CASE-XMS-00863]	c 05	N70-34857	[NASA-CASE-XMS-04798]	c 11	N71-21474			
Shock absorbing support and restraint means Patent			Shock absorber Patent					
[NASA-CASE-XMS-01240]	c 05	N70-35152	[NASA-CASE-XMS-03722]	c 15	N71-21530			
Energy absorbing structure Patent Application			Apparatus for machining geometric cones Patent					
[NASA-CASE-MSC-12279-1]	c 15	N70-35679	[NASA-CASE-XMS-04292]	c 15	N71-22722			
			Rescue litter flotation assembly Patent					
			[NASA-CASE-XMS-04170]	c 05	N71-22748			
			Aligning and positioning device Patent					
			[NASA-CASE-XMS-04178]	c 15	N71-22798			



On-film optical recording of camera lens settings [NASA-CASE-MSC-12363-1]	c 14	N73-26431	Automatic biowaste sampling [NASA-CASE-MSC-14640-1]	c 54	N76-14804	Restraining mechanism [NASA-CASE-MSC-13054-1]	c 54	N78-17677
Powerplexer [NASA-CASE-MSC-12396-1]	c 03	N73-31988	Method for manufacturing mirrors in zero gravity environment [NASA-CASE-MSC-12611-1]	c 12	N76-15189	Helmet latching and attaching ring [NASA-CASE-XMS-04670-1]	c 54	N78-17678
Foot pedal operated fluid type exercising device [NASA-CASE-MSC-11561-1]	c 05	N73-32014	Cosmic dust analyzer [NASA-CASE-MSC-13802-2]	c 35	N76-15431	Protective garment ventilation system [NASA-CASE-XMS-04928-1]	c 54	N78-17679
Digital to analog conversion apparatus [NASA-CASE-MSC-12458-1]	c 08	N73-32081	Low distortion receiver for bi-level baseband PCM waveforms [NASA-CASE-MSC-14557-1]	c 32	N76-16249	Helmet feedport [NASA-CASE-MSC-09653-1]	c 54	N78-17680
Solid state controller three axes controller [NASA-CASE-MSC-12394-1]	c 08	N74-10942	Frequency measurement by coincidence detection with standard frequency [NASA-CASE-MSC-14649-1]	c 33	N76-16331	Optical conversion method [NASA-CASE-MSC-12618-1]	c 74	N78-17865
Method for obtaining oxygen from lunar or similar soil [NASA-CASE-MSC-12408-1]	c 46	N74-13011	Space vehicle system [NASA-CASE-MSC-12561-1]	c 18	N76-17185	Emergency space-suit helmet [NASA-CASE-MSC-10954-1]	c 54	N78-18761
Adaptive voting computer system [NASA-CASE-MSC-13932-1]	c 62	N74-14920	Method of fluxless brazing and diffusion bonding of aluminum containing components [NASA-CASE-MSC-14435-1]	c 37	N76-18455	Method of producing complex aluminum alloy parts of high temper, and products thereof [NASA-CASE-MSC-19693-1]	c 26	N78-24333
Phase protection system for ac power lines [NASA-CASE-MSC-17832-1]	c 33	N74-14956	Auger attachment method for insulation [NASA-CASE-MSC-12615-1]	c 37	N76-19437	Stator rotor tools [NASA-CASE-MSC-16000-1]	c 37	N78-24544
Optical instruments [NASA-CASE-MSC-14096-1]	c 74	N74-15095	Position determination systems [NASA-CASE-MSC-12593-1]	c 17	N76-21250	Flexible pile thermal barrier insulator [NASA-CASE-MSC-19568-1]	c 34	N78-25350
Multifunction audio digitizer [NASA-CASE-MSC-13855-1]	c 35	N74-17885	Two-component ceramic coating for silica insulation [NASA-CASE-MSC-14270-1]	c 27	N76-22377	Fluid valve assembly [NASA-CASE-MSC-12731-1]	c 37	N78-25426
Method and apparatus for stable silicon dioxide layers on silicon grown in silicon nitride ambient [NASA-CASE-ERC-10073-1]	c 24	N74-19769	Three-component ceramic coating for silica insulation [NASA-CASE-MSC-14270-2]	c 27	N76-23426	Variable contour securing system [NASA-CASE-MSC-16270-1]	c 37	N78-27423
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Station keeping of a gravity gradient stabilized satellite Patent [NASA-CASE-XLA-03132]	c 31	N71-22969	Soldering device Patent [NASA-CASE-XLA-08911]	c 15	N71-27214	Variable angle tube holder [NASA-CASE-LAR-10507-1]	c 11	N72-25284
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Solar sensor having coarse and fine sensing with matched preirradiated cells and method of selecting cells Patent [NASA-CASE-XLA-01584]	c 14	N71-23269	Two component bearing Patent [NASA-CASE-XLA-00013]	c 15	N71-29136	Nondestructive spot test method for titanium and titanium alloys [NASA-CASE-LAR-10539-1]	c 17	N73-12547
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Laser grating interferometer Patent [NASA-CASE-XLA-04295]	c 16	N71-24170	Variable geometry rotor system [NASA-CASE-LAR-10557]	c 02	N72-11018	Butt welder for fine gauge tungsten/rhenium thermocouple wire [NASA-CASE-LAR-10103-1]	c 15	N73-14468
Automatic fatigue test temperature programmer Patent [NASA-CASE-XLA-02059]	c 33	N71-24276	Flared tube strainer [NASA-CASE-XLA-05056]	c 15	N72-11389	Method of detecting oxygen in a gas [NASA-CASE-LAR-10688-1]	c 06	N73-16106
Ring wing tension vehicle Patent [NASA-CASE-XLA-04901]	c 31	N71-24315	Impact measuring technique [NASA-CASE-LAR-10913]	c 14	N72-16282	Combustion detector [NASA-CASE-LAR-10739-1]	c 14	N73-16484
Process for applying black coating to metals Patent [NASA-CASE-XLA-06199]	c 15	N71-24875	Technique of duplicating fragile cores [NASA-CASE-XLA-07829]	c 15	N72-16329	Laser communication system for controlling several functions at a location remote to the laser [NASA-CASE-LAR-10311-1]	c 16	N73-16536
			Tube fabricating process [NASA-CASE-LAR-10203-1]	c 15	N72-16330	Apparatus for photographing meteors [NASA-CASE-LAR-10226-1]	c 14	N73-19419
			Air bearing [NASA-CASE-WLP-10002]	c 15	N72-17451	Zero gravity liquid mixer [NASA-CASE-LAR-10195-1]	c 15	N73-19458

Rate data encoder			Deployable pressurized cell structure for a micrometeoroid detector			Polyimide adhesives		
[NASA-CASE-LAR-10128-1]	c 08	N73-20217	[NASA-CASE-LAR-10295-1]	c 35	N74-21062	[NASA-CASE-LAR-11397-1]	c 27	N75-29263
Function generator for synthesizing complex vibration mode patterns			Means for accommodating large overstrain in lead wires			Bonding method in the manufacture of continuous regression rate sensor devices		
[NASA-CASE-LAR-10310-1]	c 10	N73-20253	[NASA-CASE-LAR-10168-1]	c 33	N74-22865	[NASA-CASE-LAR-10337-1]	c 24	N75-30260
Infrared horizon locator			Bonded joint and method			Meteoroid impact position locator aid for manned space station		
[NASA-CASE-LAR-10726-1]	c 14	N73-20475	[NASA-CASE-LAR-10900-1]	c 37	N74-23064	[NASA-CASE-LAR-10629-1]	c 35	N75-33367
Light intensity strain analysis			Light shield and cooling apparatus			Measurement of gas production of microorganisms		
[NASA-CASE-LAR-10765-1]	c 32	N73-20740	[NASA-CASE-LAR-10089-1]	c 34	N74-23066	[NASA-CASE-LAR-11326-1]	c 35	N75-33368
Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds			Method of laminating structural members			Self-supporting strain transducer		
[NASA-CASE-LAR-10578-1]	c 12	N73-25262	[NASA-CASE-XLA-11028-1]	c 24	N74-27035	[NASA-CASE-LAR-11263-1]	c 35	N75-33369
Cable restraint			Rocket having barium release system to create ion clouds in the upper atmosphere			Annular momentum control device used for stabilization of space vehicles and the like		
[NASA-CASE-LAR-10129-1]	c 15	N73-25512	[NASA-CASE-LAR-10670-2]	c 15	N74-27360	[NASA-CASE-LAR-11051-1]	c 15	N76-14158
Electronic strain-level counter			Apparatus for inserting and removing specimens from high temperature vacuum furnaces			Multichannel logarithmic RF level detector		
[NASA-CASE-LAR-10756-1]	c 32	N73-26910	[NASA-CASE-LAR-10841-1]	c 31	N74-27900	[NASA-CASE-LAR-11021-1]	c 32	N76-14321
Nondestructive spot test method for magnesium and magnesium alloys			Grinding arrangement for ball nose milling cutters			Turnstile and flared cone UHF antenna		
[NASA-CASE-LAR-10953-1]	c 17	N73-27446	[NASA-CASE-LAR-10450-1]	c 37	N74-27905	[NASA-CASE-LAR-10970-1]	c 33	N76-14372
Ablation article and method			Method of repairing discontinuity in fiberglass structures			Static pressure probe		
[NASA-CASE-LAR-10439-1]	c 33	N73-27796	[NASA-CASE-LAR-10416-1]	c 24	N74-30001	[NASA-CASE-LAR-11552-1]	c 35	N76-14429
Apparatus and method for generating large mass flow of high temperature air at hypersonic speeds			Deployable flexible ventral fins for use as an emergency spin recovery device in aircraft			Horn antenna having V-shaped corrugated slots		
[NASA-CASE-LAR-10612-1]	c 12	N73-28144	[NASA-CASE-LAR-10753-1]	c 08	N74-30421	[NASA-CASE-LAR-11112-1]	c 32	N76-15330
Pressurized panel			Apparatus for applying simulator g-forces to an arm of an aircraft simulator pilot			Ultrasonic calibration device		
[NASA-CASE-XLA-08916-2]	c 14	N73-28487	[NASA-CASE-LAR-10550-1]	c 09	N74-30597	[NASA-CASE-LAR-11435-1]	c 35	N76-15432
Apparatus for aiding a pilot in avoiding a midair collision between aircraft			Centrifugal lyophobic separator			Deploy/release system		
[NASA-CASE-LAR-10717-1]	c 21	N73-30641	[NASA-CASE-LAR-10194-1]	c 34	N74-30608	[NASA-CASE-LAR-11575-1]	c 02	N76-16014
Exposure interlock for oscilloscope cameras			Variably positioned guide vanes for aerodynamic choking			Clock setter		
[NASA-CASE-LAR-10319-1]	c 14	N73-32322	[NASA-CASE-LAR-10642-1]	c 07	N74-31270	[NASA-CASE-LAR-11458-1]	c 35	N76-16392
Meteoroid detector			Noise suppressor			Heat exchanger system and method		
[NASA-CASE-LAR-10483-1]	c 14	N73-32327	[NASA-CASE-LAR-11141-1]	c 07	N74-32418	[NASA-CASE-LAR-10799-2]	c 34	N76-17317
Lightweight, variable solidity knitted parachute fabric			Measuring probe position recorder			Stack plume visualization system		
[NASA-CASE-LAR-10776-1]	c 02	N74-10034	[NASA-CASE-LAR-10806-1]	c 35	N74-32877	[NASA-CASE-LAR-11675-1]	c 45	N76-17656
Technique for extending the frequency range of digital dividers			Stagnation pressure probe			Cascade plug nozzle		
[NASA-CASE-LAR-10730-1]	c 33	N74-10223	[NASA-CASE-LAR-11139-1]	c 35	N74-32878	[NASA-CASE-LAR-11674-1]	c 07	N76-18117
Fluid pressure amplifier and system			Molding apparatus			Exhaust flow deflector		
[NASA-CASE-LAR-10868-1]	c 33	N74-11050	[NASA-CASE-LAR-10489-2]	c 31	N74-32920	[NASA-CASE-LAR-11570-1]	c 34	N76-18364
Method of making pressure tight seal for super alloy			Remote fire stack igniter			Method and apparatus for tensile testing of metal foil		
[NASA-CASE-LAR-10170-1]	c 37	N74-11301	[NASA-CASE-MFS-21675-1]	c 25	N74-33378	[NASA-CASE-LAR-10208-1]	c 35	N76-18400
System for calibrating pressure transducer			Open tube guideway for high speed air cushioned vehicles			Method and apparatus for fluffing, separating, and cleaning fibers		
[NASA-CASE-LAR-10910-1]	c 35	N74-13132	[NASA-CASE-LAR-10256-1]	c 85	N74-34672	[NASA-CASE-LAR-11224-1]	c 37	N76-18456
Molding process for imidazopyrrolone polymers			Fast scan control for deflection type mass spectrometers			Therapeutic hand exerciser		
[NASA-CASE-LAR-10547-1]	c 31	N74-13177	[NASA-CASE-LAR-11428-1]	c 35	N74-34857	[NASA-CASE-LAR-11667-1]	c 52	N76-19785
Lyophilized spore dispenser			Apparatus for microbiological sampling			Magnetic heading reference		
[NASA-CASE-LAR-10544-1]	c 37	N74-13178	[NASA-CASE-LAR-11069-1]	c 35	N75-12272	[NASA-CASE-LAR-11387-1]	c 04	N76-20114
Transmitting and reflecting diffuser			Method of making an explosively welded scarf joint			Apparatus for positioning modular components on a vertical or overhead surface		
[NASA-CASE-LAR-10385-2]	c 70	N74-13436	[NASA-CASE-LAR-11211-1]	c 37	N75-12326	[NASA-CASE-LAR-11465-1]	c 37	N76-21554
Evacuated displacement compression molding			Determining particle density using known material Hugoniot curves			Airfoil shape for flight at subsonic speeds		
[NASA-CASE-LAR-10782-1]	c 31	N74-14133	[NASA-CASE-LAR-11059-1]	c 76	N75-12810	[NASA-CASE-LAR-10585-1]	c 02	N76-22154
Modification of one man life raft			Method for making conductors for ferrite memory arrays			Particulate and aerosol detector		
[NASA-CASE-LAR-10241-1]	c 54	N74-14845	[NASA-CASE-LAR-10994-1]	c 24	N75-13032	[NASA-CASE-LAR-11434-1]	c 35	N76-22509
Attitude sensor			Evacuated, displacement compression mold			High temperature strain gage calibration fixture		
[NASA-CASE-LAR-10586-1]	c 19	N74-15089	[NASA-CASE-LAR-10782-2]	c 31	N75-13111	[NASA-CASE-LAR-11500-1]	c 35	N76-24523
Mossbauer spectrometer radiation detector			Automatic inoculating apparatus			Vacuum pressure molding technique		
[NASA-CASE-LAR-11155-1]	c 35	N74-15091	[NASA-CASE-LAR-11074-1]	c 51	N75-13502	[NASA-CASE-LAR-10073-1]	c 37	N76-24575
In situ transfer standard for ultrahigh vacuum gage calibration			Automatic focus control for facsimile cameras			Instrumentation for measuring aircraft noise and sonic boom		
[NASA-CASE-LAR-10862-1]	c 35	N74-15092	[NASA-CASE-LAR-11213-1]	c 35	N75-15014	[NASA-CASE-LAR-11476-1]	c 07	N76-27232
Dual measurement ablation sensor			Kinesthetic control simulator			Connector		
[NASA-CASE-LAR-10105-1]	c 34	N74-15652	[NASA-CASE-LAR-10276-1]	c 09	N75-15662	[NASA-CASE-LAR-11709-1]	c 37	N76-27567
Ejectable underwater sound source recovery assembly			Electrostatic measurement system			Capillary flow weld-bonding		
[NASA-CASE-LAR-10595-1]	c 35	N74-16135	[NASA-CASE-MFS-22129-1]	c 33	N75-18477	[NASA-CASE-LAR-11726-1]	c 37	N76-27568
Wind tunnel model and method			Automatic liquid inventory collecting and dispensing unit			Detector absorptivity measuring method and apparatus		
[NASA-CASE-LAR-10812-1]	c 09	N74-17955	[NASA-CASE-LAR-11071-1]	c 35	N75-19611	[NASA-CASE-LAR-10907-1]	c 35	N76-29551
High field CdS detector for infrared radiation			Vacuum leak detector			Method for detecting pollutants		
[NASA-CASE-LAR-11027-1]	c 35	N74-18088	[NASA-CASE-LAR-11237-1]	c 35	N75-19612	[NASA-CASE-LAR-11405-1]	c 45	N76-31714
Method of fabricating an article with cavities			Spectrometer integrated with a facsimile camera			Wingtip vortex dissipator for aircraft		
[NASA-CASE-LAR-10318-1]	c 31	N74-18089	[NASA-CASE-LAR-11207-1]	c 35	N75-19613	[NASA-CASE-LAR-11645-1]	c 02	N77-10001
Apparatus for remote handling of materials			Instrumentation for measurement of aircraft noise and sonic boom			Casting propellant in rocket engine		
[NASA-CASE-LAR-10634-1]	c 37	N74-18123	[NASA-CASE-LAR-11173-1]	c 35	N75-19614	[NASA-CASE-LAR-11995-1]	c 28	N77-10213
Method for compression molding of thermosetting plastics utilizing a temperature gradient across the plastic to cure the article			Laser head for simultaneous optical pumping of several dye lasers			Anti-multipath digital signal detector		
[NASA-CASE-LAR-10489-1]	c 31	N74-18124	[NASA-CASE-LAR-11341-1]	c 36	N75-19655	[NASA-CASE-LAR-11827-1]	c 32	N77-10392
Method for determining thermo-physical properties of specimens			High lift aircraft			Weld-bonded titanium structures		
[NASA-CASE-LAR-11053-1]	c 25	N74-18551	[NASA-CASE-LAR-11252-1]	c 05	N75-25914	[NASA-CASE-LAR-11549-1]	c 37	N77-11397
Anti-buckling fatigue test assembly			Vapor phase growth of groups 3-5 compounds by hydrogen chloride transport of the elements			Phase modulating with odd and even finite power series of a modulating signal		
[NASA-CASE-LAR-10426-1]	c 09	N74-19528	[NASA-CASE-LAR-11144-1]	c 25	N75-26043	[NASA-CASE-LAR-11607-1]	c 32	N77-14292
Reefing system			Resonant waveguide stark cell			Miniature biaxial strain transducer		
[NASA-CASE-LAR-10129-2]	c 37	N74-20063	[NASA-CASE-LAR-11352-1]	c 33	N75-26245	[NASA-CASE-LAR-11648-1]	c 35	N77-14407
A synchronous binary array divider			Fluid control apparatus and method			Precision alignment apparatus for cutting a workpiece		
[NASA-CASE-ERC-10180-1]	c 60	N74-20836	[NASA-CASE-LAR-11110-1]	c 34	N75-26282	[NASA-CASE-LAR-11658-1]	c 37	N77-14478
Orbital and entry tracking accessory for globes			Electrolytic cell structure			Solid propellant rocket motor and method of making same		
[NASA-CASE-LAR-10626-1]	c 19	N74-21015	[NASA-CASE-LAR-11042-1]	c 33	N75-27252	[NASA-CASE-XLA-1349]	c 20	N77-17143
Digital controller for a Baum folding machine			Automatic microbial transfer device			Particulate and solar radiation stable coating for spacecraft		
[NASA-CASE-LAR-10688-1]	c 37	N74-21056	[NASA-CASE-LAR-11354-1]	c 35	N75-27330	[NASA-CASE-LAR-10805-2]	c 34	N77-18382
Totally confined explosive welding						Magnetic heading reference		
[NASA-CASE-LAR-10941-1]	c 37	N74-21057				[NASA-CASE-LAR-11387-2]	c 04	N77-19056
Method of fabricating an object with a thin wall having a precisely shaped slit						Binocular device for displaying numerical information in field of view		
[NASA-CASE-LAR-10409-1]	c 31	N74-21059				[NASA-CASE-LAR-11782-1]	c 74	N77-20882

Method of locating persons in distress [NASA-CASE-LAR-11390-1]	c 32	N77-21267	Wind tunnel [NASA-CASE-LAR-10135-1]	c 09	N79-21083	Wingtip vortex turbine [NASA-CASE-LAR-12544-1]	c 07	N81-27096
Amplifying ribbon extensometer [NASA-CASE-LAR-11825-1]	c 35	N77-22449	Fatigue failure load indicator [NASA-CASE-LAR-12027-1]	c 39	N79-22537	Telescoping columns [NASA-CASE-LAR-12195-1]	c 31	N81-27324
Method of forming shrink-fit compression seal [NASA-CASE-LAR-11563-1]	c 37	N77-23482	Filtering technique based on high-frequency plant modeling for high-gain control [NASA-CASE-LAR-12215-1]	c 08	N79-23097	Helmet weight simulator [NASA-CASE-LAR-12320-1]	c 54	N81-27806
Vortex generator for controlling the dispersion of effluents in a flowing liquid [NASA-CASE-LAR-12045-1]	c 34	N77-24423	Electrochemical detection device [NASA-CASE-LAR-11922-1]	c 25	N79-24073	Indirect microbial detection [NASA-CASE-LAR-12520-1]	c 51	N81-28698
Process for control of cell division [NASA-CASE-LAR-10773-3]	c 51	N77-25769	High-temperature microphone system [NASA-CASE-LAR-12375-1]	c 32	N79-24203	Rim inertial measuring system [NASA-CASE-LAR-12052-1]	c 18	N81-29152
Electro-mechanical sine/cosine generator [NASA-CASE-LAR-11389-1]	c 33	N77-26387	Magnetic suspension and pointing system [NASA-CASE-LAR-11889-1]	c 35	N79-26372	Tackifier for addition polyimides containing monoethylphthalate [NASA-CASE-LAR-12642-1]	c 27	N81-29229
Apparatus for determining thermophysical properties of test specimens [NASA-CASE-LAR-11883-1]	c 09	N77-27131	Seat cushion to provide realistic acceleration cues to aircraft simulator pilot [NASA-CASE-LAR-12149-2]	c 09	N79-31228	Automated syringe sampler [NASA-CASE-LAR-12308-1]	c 35	N81-29407
Automated single-slide staining device [NASA-CASE-LAR-11649-1]	c 51	N77-27677	Mixed diamines for lower melting addition polyimide preparation and utilization [NASA-CASE-LAR-12054-1]	c 27	N79-33316	Method of making a partial interlaminar separation composite system [NASA-CASE-LAR-12065-2]	c 24	N81-33235
Dual cycle aircraft turbine engine [NASA-CASE-LAR-11310-1]	c 07	N77-28118	Displacement probes with self-contained exciting medium [NASA-CASE-LAR-11890-1]	c 35	N80-14371	Wind tunnel supplementary Mach number minimum section insert [NASA-CASE-LAR-12532-1]	c 09	N82-11088
Composite sandwich lattice structure [NASA-CASE-LAR-11898-1]	c 24	N78-10214	Crystalline polyimides [NASA-CASE-LAR-12099-1]	c 27	N80-16158	Aluminum ion-containing polyimide adhesives [NASA-CASE-LAR-12640-1]	c 27	N82-11206
Differential sound level meter [NASA-CASE-LAR-12106-1]	c 71	N78-14867	Laser Doppler velocity simulator [NASA-CASE-LAR-12176-1]	c 36	N80-16321	Small conductive particle sensor [NASA-CASE-LAR-12552-1]	c 35	N82-11431
Thermoluminescent aerosol analysis [NASA-CASE-LAR-12046-1]	c 25	N78-15210	Static pressure orifice system testing method and apparatus [NASA-CASE-LAR-12269-1]	c 35	N80-18358	Large volume multiple-path nuclear pumped laser [NASA-CASE-LAR-12592-1]	c 36	N82-13415
CW ultrasonic bolt tensioning monitor [NASA-CASE-LAR-12016-1]	c 39	N78-15512	Improved tire/wheel concept [NASA-CASE-LAR-11895-2]	c 37	N80-18402	Moving body velocity arresting line [NASA-CASE-LAR-12372-1]	c 37	N82-18601
Solar heating system [NASA-CASE-LAR-12009-1]	c 44	N78-15560	Radar target for remotely sensing hydrological phenomena [NASA-CASE-LAR-12344-1]	c 43	N80-18498	Variable response load limiting device [NASA-CASE-LAR-12801-1]	c 37	N82-20544
Transmitting and reflecting diffuser [NASA-CASE-LAR-10385-3]	c 74	N78-15879	Solar cell angular position transducer [NASA-CASE-LAR-11999-1]	c 44	N80-18552	Air removal device [NASA-CASE-LAR-12801-1]	c 25	N82-21269
TV fatigue crack monitoring system [NASA-CASE-LAR-11490-1]	c 39	N78-16387	Detection of the transitional layer between laminar and turbulent flow areas on a wing surface [NASA-CASE-LAR-12261-1]	c 02	N80-20224	Metric half-span model support system [NASA-CASE-LAR-12441-1]	c 09	N82-23254
Method of making a composite sandwich lattice structure [NASA-CASE-LAR-11898-2]	c 24	N78-17149	CDS solid state phase insensitive ultrasonic transducer [NASA-CASE-LAR-12304-1]	c 35	N80-20559	Hydraulic actuator mechanism to control aircraft spoiler movements through dual input commands [NASA-CASE-LAR-12412-1]	c 08	N82-24205
Composite lamination method [NASA-CASE-LAR-12019-1]	c 24	N78-17150	Combined solar collector and energy storage system [NASA-CASE-LAR-12205-1]	c 44	N80-20810	Image readout device with electronically variable spatial resolution [NASA-CASE-LAR-12633-1]	c 33	N82-24416
Polyimide adhesives [NASA-CASE-LAR-12181-1]	c 27	N78-17205	Noncontacting method for measuring angular deflection [NASA-CASE-LAR-12178-1]	c 74	N80-21138	Hot foil transducer skin friction sensor [NASA-CASE-LAR-12321-1]	c 35	N82-24470
Thermal shock and erosion resistant tantalum carbide ceramic material [NASA-CASE-LAR-11902-1]	c 27	N78-17206	Chromatically corrected virtual image visual display [NASA-CASE-LAR-12251-1]	c 74	N80-27185	Continuous self-locking spiral wound seal [NASA-CASE-LAR-12315-1]	c 37	N82-24490
Optical scanner [NASA-CASE-LAR-11711-1]	c 74	N78-17866	Heat treat fixture and method of heat treating [NASA-CASE-LAR-11821-1]	c 26	N80-28492	Solar engine [NASA-CASE-LAR-12148-1]	c 44	N82-24640
Molded composite pyrogen igniter for rocket motors [NASA-CASE-LAR-12018-1]	c 20	N78-24275	Dual acting slit control mechanism [NASA-CASE-LAR-11370-1]	c 35	N80-28686	Fuselage structure using advanced technology fiber reinforced composites [NASA-CASE-LAR-11688-1]	c 24	N82-26384
Non-destructive method for applying and removing instrumentation on helicopter rotor blades [NASA-CASE-LAR-11201-1]	c 35	N78-24515	Visible and infrared polarization ratio spectrophotometer [NASA-CASE-LAR-12285-1]	c 35	N80-28687	Electrically conductive palladium containing polyimide films [NASA-CASE-LAR-12705-1]	c 25	N82-26396
Two dimensional wedge/translating shroud nozzle [NASA-CASE-LAR-11919-1]	c 07	N78-27121	Collapsible corrugated horn antenna [NASA-CASE-LAR-11745-1]	c 32	N80-29539	Digital demodulator [NASA-CASE-LAR-12659-1]	c 33	N82-26570
Remote water monitoring system [NASA-CASE-LAR-11973-1]	c 35	N78-27384	Natural turbulence electrical power generator [NASA-CASE-LAR-11551-1]	c 44	N80-29834	One-step dual purpose joining technique [NASA-CASE-LAR-12595-1]	c 33	N82-26571
Magnetic suspension and pointing system [NASA-CASE-LAR-11889-2]	c 37	N78-27424	Partial interlaminar separation system for composites [NASA-CASE-LAR-12065-1]	c 24	N81-14000	Liquid-immersible electrostatic ultrasonic transducer [NASA-CASE-LAR-12465-1]	c 33	N82-26572
Device for measuring the contour of a surface [NASA-CASE-LAR-11869-1]	c 74	N78-27904	Method for preparing addition type polyimide prepreps [NASA-CASE-LAR-12054-2]	c 27	N81-14078	Film advance indicator [NASA-CASE-LAR-12474-1]	c 35	N82-26628
Supersonic transport [NASA-CASE-LAR-11932-1]	c 05	N78-32086	Method and tool for machining a transverse slot about a bore [NASA-CASE-LAR-11855-1]	c 37	N81-14319	Interlocking wedge joint [NASA-CASE-LAR-12729-1]	c 37	N82-26676
Hypersonic airbreathing missile [NASA-CASE-LAR-12264-1]	c 15	N78-32168	Aerodynamic side-force alleviator means [NASA-CASE-LAR-12326-1]	c 02	N81-14968	Means for controlling aerodynamically induced twist [NASA-CASE-LAR-12175-1]	c 05	N82-28279
Process for preparing thermoplastic aromatic polyimides [NASA-CASE-LAR-11828-1]	c 27	N78-32261	Leading edge vortex flaps for drag reduction [NASA-CASE-LAR-12750-1]	c 02	N81-19016	Hermetically sealable package for hybrid solid-state electronic devices and the like [NASA-CASE-MS-20181-1]	c 33	N82-28549
Magnetometer with a miniature transducer and automatic scanning [NASA-CASE-LAR-11617-2]	c 35	N78-32397	Compensating linkage for main rotor control [NASA-CASE-LAR-11797-1]	c 05	N81-19087	Apparatus and process for microbial detection and enumeration [NASA-CASE-LAR-12709-1]	c 35	N82-28604
Independent power generator [NASA-CASE-LAR-11208-1]	c 44	N78-32539	Thrust augmented spin recovery device [NASA-CASE-LAR-11970-2]	c 08	N81-19130	Method for forming pyrrone molding powders and products of said method [NASA-CASE-LAR-10423-1]	c 23	N82-29358
Pseudo continuous wave instrument [NASA-CASE-LAR-12260-1]	c 35	N79-10390	Velocity vector control system augmented with direct lift control [NASA-CASE-LAR-12268-1]	c 08	N81-24106	Acoustic tooth cleaner [NASA-CASE-LAR-12471-1]	c 52	N82-29862
Nozzle extraction process and handmeter for measuring handle [NASA-CASE-LAR-12147-1]	c 31	N79-11246	Direction sensitive laser velocimeter [NASA-CASE-LAR-12177-1]	c 36	N81-24422	Pyroelectric detector arrays [NASA-CASE-LAR-12363-1]	c 35	N82-31659
Fluid velocity measuring device [NASA-CASE-LAR-11729-1]	c 34	N79-12359	Tire/wheel concept [NASA-CASE-LAR-11695-2]	c 37	N81-24443	Decoupler pylon: wing/store flutter suppressor [NASA-CASE-LAR-12468-1]	c 08	N82-32373
Totally confined explosive welding [NASA-CASE-LAR-10941-2]	c 37	N79-13364	Lightweight structural columns [NASA-CASE-LAR-12095-1]	c 31	N81-25258	Multilayer thermal protection system [NASA-CASE-LAR-12620-1]	c 24	N82-32417
Vortex-lift roll-control device [NASA-CASE-LAR-11868-2]	c 08	N79-14108	Foldable beam [NASA-CASE-LAR-12077-1]	c 31	N81-25259	Scanning afocal laser velocimeter projection lens system [NASA-CASE-LAR-12328-1]	c 36	N82-32712
Electronically scanned pressure sensor module with in situ calibration capability [NASA-CASE-LAR-12230-1]	c 35	N79-14347	Cooling system for high speed aircraft [NASA-CASE-LAR-12406-1]	c 05	N81-26114	Mechanical end joint system for structural column elements [NASA-CASE-LAR-12482-1]	c 37	N82-32732
Versatile LDV burst simulator [NASA-CASE-LAR-11859-1]	c 35	N79-14349	Pitch attitude stabilization system utilizing engine pressure ratio feedback signals [NASA-CASE-LAR-12562-1]	c 08	N81-26152	Photocapacitive image converter [NASA-CASE-LAR-12513-1]	c 44	N82-32841
Locking redundant link [NASA-CASE-LAR-11900-1]	c 37	N79-14382	Orbiter/launch system [NASA-CASE-LAR-12250-1]	c 14	N81-26161	Pulsed phase locked loop strain monitor [NASA-CASE-LAR-12772-1]	c 33	N83-16626
Chromatically corrected virtual image display [NASA-CASE-LAR-12251-1]	c 74	N79-14892	Adaptive polarization separation [NASA-CASE-LAR-12196-1]	c 33	N81-26358	Ampoule sealing apparatus and process [NASA-CASE-LAR-12847-1]	c 33	N83-16633
Apparatus for measuring an aircraft's speed and height [NASA-CASE-LAR-12275-1]	c 35	N79-18296				Sound shield [NASA-CASE-LAR-12883-1]	c 71	N83-17235
Volumetric direct nuclear pumped laser [NASA-CASE-LAR-12183-1]	c 36	N79-18307						

Modified spiral wound retaining ring [NASA-CASE-LAR-12361-1]	c 37	N83-19091	Acoustic ground impedance meter [NASA-CASE-LAR-12995-1]	c 35	N84-22933	Precision manipulator heating and cooling apparatus for use in UHV systems with sample transfer capability [NASA-CASE-LAR-13040-1]	c 37	N85-29286
Pumped vortex [NASA-CASE-LAR-12625-1]	c 02	N83-19715	Photoelectrochemical cells including chalcogenophosphate photoelectrodes [NASA-CASE-LAR-12958-1]	c 44	N84-23019	Fully redundant mechanical release actuator [NASA-CASE-LAR-13198-1]	c 37	N85-29287
A single frequency multitransmitter telemetry system [NASA-CASE-LAR-13006-1]	c 17	N83-20995	Heads up display [NASA-CASE-LAR-12630-1]	c 06	N84-27733	Dual differential interferometer [NASA-CASE-LAR-12966-1]	c 35	N85-30282
Miniature spectrally selective dosimeter [NASA-CASE-LAR-12469-1]	c 35	N83-21311	Shell tile thermal protection system [NASA-CASE-LAR-12862-1]	c 27	N84-27886	Mechanical fastener [NASA-CASE-LAR-12738-2]	c 37	N85-30335
Aeroelastic instability stoppers for wind tunnel models [NASA-CASE-LAR-12458-1]	c 44	N83-21503	Strain gage calibration [NASA-CASE-LAR-12743-1]	c 35	N84-28019	Self-locking mechanical center joint [NASA-CASE-LAR-12864-1]	c 37	N85-30336
Aeroelastic instability stoppers for wind tunnel models [NASA-CASE-LAR-12720-1]	c 44	N83-21504	Directional gear ratio transmissions [NASA-CASE-LAR-12644-1]	c 37	N84-28084	Method for thermal monitoring subcutaneous tissue [NASA-CASE-LAR-13028-1]	c 52	N85-30618
Pyroelectric detector arrays [NASA-CASE-LAR-12363-2]	c 33	N83-24763	Tubing and cable cutting tool [NASA-CASE-LAR-12786-1]	c 37	N84-28085	Method for determining the point of zero zeta potential of semiconductor [NASA-CASE-LAR-12893-1]	c 76	N85-30923
Elastomer toughened polyimide adhesives [NASA-CASE-LAR-12775-1]	c 27	N83-28240	Radionuclide counting technique for measuring wind velocity and direction [NASA-CASE-LAR-12971-1]	c 47	N84-28292	Process for improving moisture resistance of epoxy resins by addition of chromium ions [NASA-CASE-LAR-13226-1]	c 27	N85-34282
Solar driven liquid metal MHD power generator [NASA-CASE-LAR-12495-1]	c 44	N83-28573	Medical clip [NASA-CASE-LAR-12650-1]	c 52	N84-28388	Tensile testing apparatus [NASA-CASE-LAR-13243-1]	c 35	N85-34375
Stirling cycle cryogenic cooler [US-PATENT-4,389,849]	c 44	N83-28574	Process of making medical clip [NASA-CASE-LAR-12650-2]	c 52	N84-28389	Wingtip vortex propeller [NASA-CASE-LAR-13019-1]	c 07	N85-35194
Instrument for determining coincidence and elapse time between independent sources of random sequential events [NASA-CASE-LAR-12531-1]	c 35	N83-29651	Shapes for rotating airfoils [NASA-CASE-LAR-12396-1]	c 02	N84-28732	Dual towline spin-recovery device [NASA-CASE-LAR-13076-1]	c 08	N85-35200
Flow resistivity instrument [NASA-CASE-LAR-13053-1]	c 43	N83-29783	A system for controlling the oxygen content of a gas produced by combustion [NASA-CASE-LAR-13257-1]	c 25	N84-32447	Technique for measuring gas conversion factors [NASA-CASE-LAR-13220-1]	c 34	N86-12547
Vibration isolation and pressure compensation apparatus for sensitive instrumentation [NASA-CASE-LAR-12728-1]	c 35	N83-32026	Structural pressure sensitive silicone adhesives [NASA-CASE-LAR-13270-1]	c 27	N84-32532	Aerospace vehicle [NASA-CASE-LAR-13155-1]	c 05	N86-19310
Fixture for environmental exposure of structural materials under compression load [NASA-CASE-LAR-12602-1]	c 39	N83-32081	Helicopter anti-torque system using strakes [NASA-CASE-LAR-13233-1]	c 05	N84-33400	Process of end-capping a polyimide system [NASA-CASE-LAR-13135-1]	c 27	N86-19456
Polyphenylquinoxalines containing pendant phenylethynyl and ethynyl groups [NASA-CASE-LAR-12838-1]	c 27	N83-34040	Curved cap corrugated sheet [NASA-CASE-LAR-12884-1]	c 18	N84-33450	Polyenamines from aromatic diacetylenic diketones and diamines [NASA-CASE-LAR-13444-1-CU]	c 27	N86-19462
Solvent resistant thermoplastic aromatic poly(midesulfone) and process for preparing same [NASA-CASE-LAR-12858-1]	c 27	N83-34041	Model mount system for testing flutter [NASA-CASE-LAR-12950-1]	c 09	N84-34448	Sequentially deployable maneuverable tetrahedral beam [NASA-CASE-LAR-13098-1]	c 31	N86-19479
Heating and cooling system [NASA-CASE-LAR-12393-1]	c 34	N83-34221	Process for improving mechanical properties of epoxy resins by addition of cobalt ions [NASA-CASE-LAR-13230-1]	c 24	N84-34571	Acoustic guide for noise transmission testing of aircraft [NASA-CASE-LAR-13111-1-CU]	c 71	N86-20086
Variable anodic thermal control coating [NASA-CASE-LAR-12719-1]	c 44	N83-34449	Remote pivot decoupler pylon: Wing/store suppression [NASA-CASE-LAR-13173-1]	c 05	N85-19981	Airplane automatic control force trimming device for asymmetric engine failures [NASA-CASE-LAR-13280-1]	c 08	N86-20397
Explosively activated egress area [NASA-CASE-LAR-12624-1]	c 01	N83-35992	Leading edge flap system for aircraft control augmentation [NASA-CASE-LAR-12787-2]	c 08	N85-19985	High temperature polyimide film laminates and process for preparation thereof [NASA-CASE-LAR-13384-1]	c 27	N86-20561
Error correction method and apparatus for electronic timepieces [NASA-CASE-LAR-12654-1]	c 33	N83-36357	Thermoset-thermoplastic aromatic polyamide containing N-propargyl groups [NASA-CASE-LAR-12723-1]	c 27	N85-20123	Thermoplastics/thermosetting adhesive specimen bonding [NASA-CASE-LAR-13066-1]	c 27	N86-20564
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Nickel-base alloy containing Mo-W-Al-Cr-Ta-Zr-C-Nb-B Patent		Alloys for bearings Patent		Ion thruster magnetic field control	
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Boiler for generating high quality vapor Patent		Metallic film diffusion for boundary lubrication Patent		Controllable load insensitive power converters	
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Thrust and direction control apparatus Patent		Thermal radiation shielding Patent		Electrical insulating layer process	
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Linear magnetic brake with two windings Patent		Method of attaching a cover glass to a silicon solar cell Patent		Method for producing dispersion strengthened alloys by converting metal to a halide, comminuting, reducing the metal halide to the metal and sintering	
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Pressure monitoring with a plurality of ionization gauges controlled at a central location Patent		Ion beam deflector Patent		Spiral groove seal	
[NASA-CASE-XLE-00787]	c 14 N71-21090	[NASA-CASE-LEW-10689-1]	c 28 N71-26173	[NASA-CASE-XLE-10326-2]	c 15 N72-29488
Control of transverse instability in rocket combustors Patent		Rolling element bearings Patent		Production of high purity I-123	
[NASA-CASE-XLE-04603]	c 33 N71-21507	[NASA-CASE-XLE-09527-2]	c 15 N71-26189	[NASA-CASE-LEW-10518-1]	c 24 N72-33681
High voltage divider system Patent		Ion thruster accelerator system Patent		Electrostatic collector for charged particles	
[NASA-CASE-XLE-02008]	c 09 N71-21583	[NASA-CASE-LEW-10106-1]	c 28 N71-26642	[NASA-CASE-LEW-11192-1]	c 09 N73-13208
Plasma device feed system Patent		Propellant feed isolator Patent		Method of making apparatus for sensing temperature	
[NASA-CASE-XLE-02902]	c 25 N71-21694	[NASA-CASE-LEW-10210-1]	c 28 N71-26781	[NASA-CASE-XLE-05230-2]	c 14 N73-13417
Burning rate control of solid propellants Patent		Heat activated cell Patent		Method of forming superalloys	
[NASA-CASE-XLE-03494]	c 27 N71-21819	[NASA-CASE-LEW-11359]	c 03 N71-28579	[NASA-CASE-LEW-10805-1]	c 15 N73-13465
Protective device for machine and metalworking tools Patent		Process for glass coating an ion accelerator grid Patent		Rocket thrust throttling system	
[NASA-CASE-XLE-01092]	c 15 N71-22797	[NASA-CASE-LEW-10278-1]	c 15 N71-28582	[NASA-CASE-LEW-10374-1]	c 28 N73-13773
Cryogenic insulation system Patent		Fluid jet amplifier Patent		Gas turbine engine fuel control	
[NASA-CASE-XLE-04222]	c 23 N71-22881	[NASA-CASE-XLE-09341]	c 12 N71-28741	[NASA-CASE-LEW-11187-1]	c 28 N73-19793
Method for producing fiber reinforced metallic composites Patent		Gas core nuclear reactor Patent		Thermocouple tape	
[NASA-CASE-XLE-03925]	c 18 N71-22894	[NASA-CASE-LEW-10250-1]	c 22 N71-28759	[NASA-CASE-LEW-11072-1]	c 14 N73-24472
Thermal shock apparatus Patent		Gas turbine combustor Patent		Method and apparatus for sputtering utilizing an apertured electrode and a pulsed substrate bias	
[NASA-CASE-XLE-02024]	c 14 N71-22964	[NASA-CASE-LEW-10286-1]	c 28 N71-28915	[NASA-CASE-LEW-10920-1]	c 17 N73-24569
Arc electrode of graphite with ball tip Patent		Cyclic switch Patent		Magneto-plasma-dynamic arc thruster	
[NASA-CASE-XLE-04788]	c 09 N71-22987	[NASA-CASE-LEW-10155-1]	c 09 N71-29035	[NASA-CASE-LEW-11180-1]	c 25 N73-25760
Gas purged dry box glove Patent		Temperature reducing coating for metals subject to flame exposure Patent		Ablative system	
[NASA-CASE-XLE-02531]	c 05 N71-23080	[NASA-CASE-XLE-00035]	c 33 N71-29151	[NASA-CASE-LEW-10359-2]	c 33 N73-25952
Automatic recording McLeod gauge Patent		Liquid spray cooling method Patent		Parasitic suppressing circuit	
[NASA-CASE-XLE-03280]	c 14 N71-23093	[NASA-CASE-XLE-00027]	c 33 N71-29152	[NASA-CASE-ERC-10403-1]	c 10 N73-26228
Electronic cathode having a brush-like structure and a relatively thick oxide emissive coating Patent		Turbo-machine blade vibration damper Patent		Twisted multifilament superconductor	
[NASA-CASE-XLE-04501]	c 09 N71-23190	[NASA-CASE-XLE-00155]	c 28 N71-29154	[NASA-CASE-LEW-11726-1]	c 26 N73-26752
High temperature ferromagnetic cobalt-base alloy Patent		Corrosion resistant beryllium Patent		Ophthalmic method and apparatus	
[NASA-CASE-XLE-03629]	c 17 N71-23248	[NASA-CASE-LEW-10327]	c 17 N71-33408	[NASA-CASE-LEW-11669-1]	c 05 N73-27062
Induction furnace with perforated tungsten foil shielding Patent		Integrated thermoelectric generator/space antenna combination		Single grid accelerator for an ion thruster	
[NASA-CASE-XLE-04026]	c 14 N71-23267	[NASA-CASE-XER-09521]	c 09 N72-12136	[NASA-CASE-XLE-10453-2]	c 28 N73-27699
Gd or Sm doped silicon semiconductor composition Patent		Sensing probe		Preparation of polyimides from mixtures of monomeric diamines and esters of polycarboxylic acids	
[NASA-CASE-XLE-10715]	c 26 N71-23292	[NASA-CASE-LEW-10281-1]	c 14 N72-17327	[NASA-CASE-LEW-11325-1]	c 06 N73-27980
Protection of serially connected solar cells against open circuits by the use of shunting diode Patent		Method of making emf cell		Method and apparatus for measuring electromagnetic radiation	
[NASA-CASE-XLE-04535]	c 03 N71-23354	[NASA-CASE-LEW-11359-2]	c 03 N72-20034	[NASA-CASE-LEW-11159-1]	c 14 N73-28488
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[NASA-CASE-XLE-02823]	c 09 N71-23443	[NASA-CASE-XLE-04599]	c 22 N72-20597	[NASA-CASE-LEW-10533-1]	c 15 N73-28515
Silicon solar cell with cover glass bonded to cell by metal pattern Patent		Switching regulator		Low mass rolling element for bearings	
[NASA-CASE-XLE-08569]	c 03 N71-23449	[NASA-CASE-LEW-11005-1]	c 09 N72-21243	[NASA-CASE-LEW-11087-1]	c 15 N73-30458
		Saturation current protection apparatus for saturable core transformers		Swirl can primary combustor	
		[NASA-CASE-ERC-10075-2]	c 09 N72-22196	[NASA-CASE-LEW-11326-1]	c 23 N73-30665
		Pulse coupling circuit		Enhanced diffusion welding	
		[NASA-CASE-LEW-10433-1]	c 09 N72-22197	[NASA-CASE-LEW-11388-1]	c 15 N73-32358
				High speed hybrid bearing comprising a fluid bearing and a rolling bearing connected in series	
				[NASA-CASE-LEW-11152-1]	c 15 N73-32359
				Nickel aluminide coated low alloy stainless steel	
				[NASA-CASE-LEW-11267-1]	c 17 N73-32414
				Cobalt-base alloy	
				[NASA-CASE-LEW-10436-1]	c 17 N73-32415

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Zero gravity apparatus Patent  
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Electron beam instrument for measuring electric fields Patent  
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Anemometer with braking mechanism Patent  
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Swivel support for gas bearings Patent  
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Welding skate with computerized control Patent  
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Docking structure for spacecraft Patent  
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High pressure helium purifier Patent  
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Horizontal cryostat for fatigue testing Patent  
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Method for leakage testing of tanks Patent  
[NASA-CASE-XMF-02392] c 32 N71-24285

Internal flare angle gauge Patent  
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Pulse rise time and amplitude detector Patent  
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System for maintaining a motor at a predetermined speed utilizing digital feedback means Patent  
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Power system with heat pipe liquid coolant lines Patent  
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Apparatus for determining the deflection of an electron beam impinging on a target Patent  
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Transistor servo system including a unique differential amplifier circuit Patent  
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RC rate generator for slow speed measurement Patent  
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Method and apparatus for precision sizing and joining of large diameter tubes Patent  
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Duct coupling for single-handed operation Patent  
[NASA-CASE-MFS-20395] c 15 N71-24903

Brushless direct current tachometer Patent  
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Self-lubricating gears and other mechanical parts Patent  
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Pulse width inverter Patent  
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Isothermal cover with thermal reservoirs Patent  
[NASA-CASE-MFS-20355] c 33 N71-25353

Storage container for electronic devices Patent  
[NASA-CASE-MFS-20075] c 09 N71-26133

Method and apparatus for precision sizing and joining of large diameter tubes Patent  
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Filter system for control of outgas contamination in vacuum Patent  
[NASA-CASE-MFS-14711] c 15 N71-26185

Image magnification adapter for cameras Patent  
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Thickness measuring and injection device Patent  
[NASA-CASE-MFS-20261] c 14 N71-27005

Personal propulsion unit Patent  
[NASA-CASE-MFS-20130] c 28 N71-27585

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Method of making shielded flat cable Patent  
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A dc motor speed control system Patent  
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Method of coating through-holes Patent  
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Current regulating voltage divider Patent  
[NASA-CASE-MFS-20935] c 09 N71-34212

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Method of making foamed materials in zero gravity Patent  
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Underwater space suit pressure control regulator Patent  
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Apparatus for making diamonds Patent  
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An airlock Patent  
[NASA-CASE-MFS-20922] c 31 N71-20840

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Liquid aerosol dispenser Patent  
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Optical probing of supersonic flows with statistical correlation Patent  
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[NASA-CASE-MFS-20413] c 15 N71-21463

Hermetically sealed elbow actuator Patent  
[NASA-CASE-MFS-14710] c 09 N71-22195

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High temperature furnace for melting materials in space Patent  
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Silphenylenesiloxane polymers having in-chain perfluoroalkyl groups Patent  
[NASA-CASE-MFS-20979] c 06 N71-25151

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Lead attachment to high temperature devices Patent  
[NASA-CASE-ERC-10224] c 09 N71-25261

Device for measuring bearing preload Patent  
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Altitude simulation chamber for rocket engine testing Patent  
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**United Technologies Corp., Windsor Locks, Conn.**

- Cam-operated pitch-change apparatus  
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**United Technology Center, Sunnyvale, Calif.**

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**Virginia Commonwealth Univ., Richmond**

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- Electronic background suppression method and apparatus for a field scanning sensor  
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- Solid-state current transformer  
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- Time delay and integration detectors using charge transfer devices  
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**Westinghouse Electric Corp., Lima, Ohio**

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**Westinghouse Electric Corp., Pittsburgh, Pa.**

- Linear sawtooth voltage-wave generator employing transistor timing circuit having capacitor-zener diode combination feedback Patent  
[NASA-CASE-XMS-01315] c 09 N70-41675

- Thermal conductive connection and method of making same Patent  
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- Gas cooled high temperature thermocouple Patent  
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- Extended area semiconductor radiation detectors and a novel readout arrangement Patent  
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- Bearing and gimbal lock mechanism and spiral flex lead module Patent  
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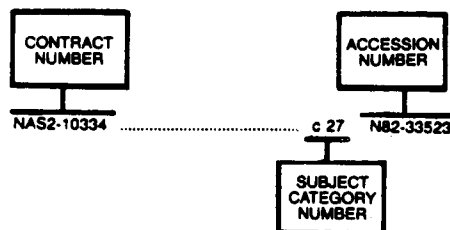


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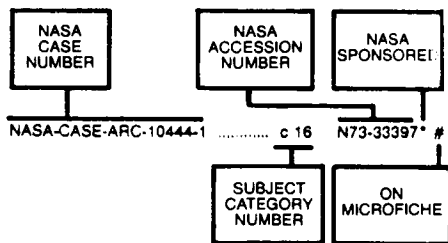
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NAS 1.71:ARC-13522-1	c 09	N86-31594 *	#
NAS 1.71:ARC-13532-1	c 34	N86-26575 *	#
NAS 1.71:ARC-13540-1	c 25	N86-32541 *	#
NAS 1.71:ARC-13542-1	c 25	N86-32540 *	#
NAS 1.71:ARC-13555-1	c 23	N86-32526 *	#
NAS 1.71:ARC-13560-1	c 35	N86-32701 *	#
NAS 1.71:ARC-13066-1	c 27	N86-20564 *	#
NAS 1.71:LEW-12995-1	c 37	N84-33808 *	#
NAS 1.71:LEW-13324-2	c 24	N85-21266 *	#
NAS 1.71:LEW-13414-1	c 44	N85-20530 *	#
NAS 1.71:LEW-13495-1	c 33	N84-33663 *	#
NAS 1.71:LEW-13524-1	c 07	N84-33410 *	#
NAS 1.71:LEW-13639-1	c 26	N84-33555 *	#
NAS 1.71:LEW-13770-3	c 27	N85-21350 *	#
NAS 1.71:LEW-13770-4	c 27	N85-21351 *	#
NAS 1.71:LEW-13770-5	c 27	N85-21352 *	#
NAS 1.71:LEW-13827-1	c 44	N85-21768 *	#
NAS 1.71:LEW-13833-1	c 33	N85-21492 *	#
NAS 1.71:LEW-13837-2	c 24	N85-21267 *	#
NAS 1.71:LEW-13881-1	c 20	N85-21256 *	#
NAS 1.71:LEW-13899-1	c 31	N86-20587 *	#
NAS 1.71:LEW-13935-1	c 33	N85-20248 *	#
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NAS 1.71:LEW-14072-3	c 27	N86-26434 *	#
NAS 1.71:LEW-14080-1	c 31	N85-20153 *	#
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NAS 1.71:LEW-14108-1	c 33	N85-29149 *	#
NAS 1.71:LEW-14127-1	c 33	N86-20680 *	#
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NAS 1.71:LEW-14212-1	c 37	N86-32740 *	#
NAS 1.71:LEW-14261-1	c 26	N86-26414 *	#
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NAS 1.71:MFS-25861-1	c 33	N85-22877 *	#
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NAS 1.71:MFS-26009-1SB	c 35	N86-22114 *	#
NAS 1.71:MFS-26001-1	c 37	N85-29289 *	#
NAS 1.71:MFS-26008-1	c 35	N85-20300 *	#
NAS 1.71:MFS-26013-1	c 89	N86-22459 *	#
NAS 1.71:MFS-26044-1	c 31	N86-23750 *	#
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NAS 1.71:MFS-26153-1	c 31	N86-32589 *	#
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NAS 1.71:NPO-16402-1	c 36	N85-29265 *	NASA-CASE-ARC-10461-1	c 44	N74-33379 *	NASA-CASE-ARC-11052-1	c 37	N79-28551 *
NAS 1.71:NPO-16414-1-CU	c 32	N85-29121 *	NASA-CASE-ARC-10462-1	c 37	N74-27901 *	NASA-CASE-ARC-11053-1	c 25	N79-10162 *
NAS 1.71:NPO-16420-1	c 33	N86-20681 *	NASA-CASE-ARC-10463-1	c 09	N73-32111 *	NASA-CASE-ARC-11057-1	c 27	N78-31233 *
NAS 1.71:NPO-16423-1-CU	c 37	N86-19610 *	NASA-CASE-ARC-10464-1	c 27	N74-12812 *	NASA-CASE-ARC-11058-1	c 54	N78-31735 *
NAS 1.71:NPO-16433-1	c 36	N86-20778 *	NASA-CASE-ARC-10466-1	c 60	N75-13539 *	NASA-CASE-ARC-11058-2	c 54	N79-24651 *
NAS 1.71:NPO-16461-1-CU	c 60	N86-23283 *	NASA-CASE-ARC-10467-1	c 09	N73-14214 *	NASA-CASE-ARC-11059-1	c 54	N78-32721 *
NAS 1.71:NPO-16462-1-CU	c 60	N86-24225 *	NASA-CASE-ARC-10468-1	c 14	N73-33361 *	NASA-CASE-ARC-11060-1	c 27	N79-22300 *
NAS 1.71:NPO-16464-1-CU	c 60	N86-24224 *	NASA-CASE-ARC-10469-1	c 25	N75-12086 *	NASA-CASE-ARC-11097-1	c 25	N82-24312 *
NAS 1.71:NPO-16467-1-CU	c 33	N86-24908 *	NASA-CASE-ARC-10470-1	c 02	N73-26005 *	NASA-CASE-ARC-11100-1	c 54	N78-31736 *
NAS 1.71:NPO-16479-1-CU	c 35	N85-29219 *	NASA-CASE-ARC-10470-3	c 05	N76-29217 *	NASA-CASE-ARC-11101-1	c 54	N78-17675 *
NAS 1.71:NPO-16494-1-CU	c 34	N85-29182 *	NASA-CASE-ARC-10516-1	c 70	N74-21300 *	NASA-CASE-ARC-11104-1	c 15	N79-26100 *
NAS 1.71:NPO-16497-1-CU	c 36	N86-20779 *	NASA-CASE-ARC-10519-2	c 05	N75-25915 *	NASA-CASE-ARC-11106-1	c 05	N80-14107 *
NAS 1.71:NPO-16526-1-CU	c 44	N86-21981 *	NASA-CASE-ARC-10583-1	c 52	N76-29894 *	NASA-CASE-ARC-11107-1	c 25	N80-16116 *
NAS 1.71:NPO-16542-1-CU	c 36	N86-20780 *	NASA-CASE-ARC-10592-1	c 27	N74-21156 *	NASA-CASE-ARC-11110-1	c 37	N82-24492 *
NAS 1.71:NPO-16544-1-CU	c 35	N86-20755 *	NASA-CASE-ARC-10592-2	c 27	N76-32315 *	NASA-CASE-ARC-11114-1	c 51	N81-14605 *
NAS 1.71:NPO-16558-1-CU	c 74	N86-20129 *	NASA-CASE-ARC-10593-1	c 33	N74-27682 *	NASA-CASE-ARC-11116-1	c 33	N82-24420 *
NAS 1.71:NPO-16567-1-CU	c 36	N86-20777 *	NASA-CASE-ARC-10596-1	c 33	N74-21851 *	NASA-CASE-ARC-11117-1	c 52	N81-14612 *
NAS 1.71:NPO-16584-1-CU	c 76	N86-25269 *	NASA-CASE-ARC-10597-1	c 52	N74-20726 *	NASA-CASE-ARC-11118-1	c 52	N81-29764 *
NAS 1.71:NPO-16640-1-CU	c 72	N86-27055 *	NASA-CASE-ARC-10598-1	c 75	N74-30156 *	NASA-CASE-ARC-11118-2	c 52	N81-14613 *
NAS 1.71:NPO-16675-1-CU	c 71	N86-20087 *	NASA-CASE-ARC-10599-1	c 05	N73-26071 *	NASA-CASE-ARC-11120-1	c 52	N80-18691 *
NAS 1.71:NPO-16681-1-CU	c 76	N86-21401 *	NASA-CASE-ARC-10631-1	c 74	N76-20958 *	NASA-CASE-ARC-11121-1	c 25	N79-14169 *
NAS 1.71:NPO-16734-1-CU	c 31	N86-27467 *	NASA-CASE-ARC-10633-1	c 25	N74-26947 *	NASA-CASE-ARC-11154-1	c 25	N80-23383 *
NAS 1.71:NPO-16869	c 74	N86-33138 *	NASA-CASE-ARC-10637-1	c 35	N75-16783 *	NASA-CASE-ARC-11157-1	c 37	N80-18393 *
NAS 1.71:WLP-10055-2	c 35	N85-21598 *	NASA-CASE-ARC-10639-1	c 35	N78-13400 *	NASA-CASE-ARC-11158-1	c 09	N82-24212 *
NAS 1.71:13178-1	c 27	N86-20565 *	NASA-CASE-ARC-10642-1	c 36	N76-14447 *	NASA-CASE-ARC-11164-1	c 44	N83-34448 *
NAS 1.71:MFS-28058-1	c 37	N86-19611 *	NASA-CASE-ARC-10643-1	c 25	N75-12087 *	NASA-CASE-ARC-11167-1	c 52	N81-25662 *
			NASA-CASE-ARC-10710-1	c 09	N75-12969 *	NASA-CASE-ARC-11169-1	c 24	N79-24062 *
NASA 1.71:MFS-26011-1-SB	c 52	N85-20639 *	NASA-CASE-ARC-10711-2	c 33	N76-21390 *	NASA-CASE-ARC-11170-1	c 27	N79-12151 *
			NASA-CASE-ARC-10712-1	c 07	N74-33218 *	NASA-CASE-ARC-11174-1	c 24	N81-13999 *
NASA-CASE-ARC-10003-1	c 09	N71-25866 *	NASA-CASE-ARC-10714-1	c 27	N76-15310 *	NASA-CASE-ARC-11176-1	c 27	N82-18389 *
NASA-CASE-ARC-10009-1	c 15	N71-17822 *	NASA-CASE-ARC-10716-1	c 35	N77-20399 *	NASA-CASE-ARC-11176-2	c 27	N81-27721 *
NASA-CASE-ARC-10017-1	c 14	N72-29464 *	NASA-CASE-ARC-10721-1	c 27	N76-22376 *	NASA-CASE-ARC-11241-1	c 25	N81-14016 *
NASA-CASE-ARC-10020	c 10	N72-17172 *	NASA-CASE-ARC-10722-1	c 51	N75-25503 *	NASA-CASE-ARC-11242-3	c 23	N85-33187 *
NASA-CASE-ARC-10030	c 09	N71-12521 *	NASA-CASE-ARC-10753-1	c 54	N75-27760 *	NASA-CASE-ARC-11244-1	c 23	N82-16174 *
NASA-CASE-ARC-10042-2	c 10	N72-11256 *	NASA-CASE-ARC-10754-1	c 07	N75-24736 *	NASA-CASE-ARC-11245-1	c 28	N82-18401 *
NASA-CASE-ARC-10043-1	c 05	N71-11193 *	NASA-CASE-ARC-10755-2	c 34	N76-27517 *	NASA-CASE-ARC-11246-1	c 31	N83-34073 *
NASA-CASE-ARC-10050	c 03	N71-33409 *	NASA-CASE-ARC-10756-1	c 54	N77-32721 *	NASA-CASE-ARC-11248-1	c 27	N81-17259 *
NASA-CASE-ARC-10097-2	c 07	N73-25160 *	NASA-CASE-ARC-10760-1	c 25	N76-22323 *	NASA-CASE-ARC-11251-1	c 37	N81-17433 *
NASA-CASE-ARC-10098-1	c 06	N71-24739 *	NASA-CASE-ARC-10761-1	c 07	N77-18154 *	NASA-CASE-ARC-11252-1	c 25	N83-36118 *
NASA-CASE-ARC-10099-1	c 18	N71-15469 *	NASA-CASE-ARC-10802-1	c 35	N75-30502 *	NASA-CASE-ARC-11253-1	c 27	N81-17262 *
NASA-CASE-ARC-10100-1	c 05	N71-24738 *	NASA-CASE-ARC-10806-1	c 35	N75-29381 *	NASA-CASE-ARC-11253-2	c 27	N82-24338 *
NASA-CASE-ARC-10101-1	c 09	N71-33109 *	NASA-CASE-ARC-10806	c 06	N74-27872 *	NASA-CASE-ARC-11253-3	c 27	N81-24256 *
NASA-CASE-ARC-10105	c 09	N72-17153 *	NASA-CASE-ARC-10807-1	c 05	N77-17029 *	NASA-CASE-ARC-11256-1	c 15	N82-24272 *
NASA-CASE-ARC-10106-1	c 28	N72-22769 *	NASA-CASE-ARC-10808-1	c 09	N76-24280 *	NASA-CASE-ARC-11257-1	c 04	N81-21047 *
NASA-CASE-ARC-10131-1	c 15	N71-27754 *	NASA-CASE-ARC-10810-1	c 33	N76-19339 *	NASA-CASE-ARC-11258-1	c 52	N80-33081 *
NASA-CASE-ARC-10132-1	c 09	N71-24597 *	NASA-CASE-ARC-10812-1	c 07	N83-33884 *	NASA-CASE-ARC-11261-1	c 24	N83-25789 *
NASA-CASE-ARC-10134	c 30	N72-17873 *	NASA-CASE-ARC-10813-1	c 27	N76-16230 *	NASA-CASE-ARC-11264-2	c 52	N83-29991 *
NASA-CASE-ARC-10136-1	c 09	N72-22202 *	NASA-CASE-ARC-10814-2	c 07	N80-26298 *	NASA-CASE-ARC-11267-2	c 23	N82-28353 *
NASA-CASE-ARC-10137-1	c 09	N71-28468 *	NASA-CASE-ARC-10816-1	c 35	N76-24525 *	NASA-CASE-ARC-11310-1	c 27	N82-24339 *
NASA-CASE-ARC-10138-1	c 14	N72-24477 *	NASA-CASE-ARC-10820-1	c 35	N78-19466 *	NASA-CASE-ARC-11311-1	c 74	N83-13978 *
NASA-CASE-ARC-10140-1	c 15	N71-17653 *	NASA-CASE-ARC-10849-1	c 17	N76-29347 *	NASA-CASE-ARC-11312-1	c 36	N83-34304 *
NASA-CASE-ARC-10153	c 05	N71-28619 *	NASA-CASE-ARC-10855-1	c 52	N77-10780 *	NASA-CASE-ARC-11314-1	c 54	N82-36987 *
NASA-CASE-ARC-10154-1	c 14	N72-22440 *	NASA-CASE-ARC-10892-2	c 27	N79-14214 *	NASA-CASE-ARC-11317-1	c 35	N83-34272 *
NASA-CASE-ARC-10160-1	c 23	N72-27728 *	NASA-CASE-ARC-10896-1	c 35	N78-19465 *	NASA-CASE-ARC-11321-1	c 27	N81-27272 *
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NASA-CASE-ARC-10179-1	c 21	N72-22619 *	NASA-CASE-ARC-10899-1	c 60	N77-19760 *	NASA-CASE-ARC-11326-1	c 25	N83-33977 *
NASA-CASE-ARC-10180-1	c 28	N72-20767 *	NASA-CASE-ARC-10900-1	c 35	N77-24454 *	NASA-CASE-ARC-11349-1	c 37	N86-20797 *
NASA-CASE-ARC-10180-1	c 27	N74-12814 *	NASA-CASE-ARC-10903-1	c 09	N78-18083 *	NASA-CASE-ARC-11354-1	c 74	N83-21949 *
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NASA-CASE-ARC-10194-1	c 23	N73-20741 *	NASA-CASE-ARC-10907-1	c 37	N75-32465 *	NASA-CASE-ARC-11361-1	c 35	N84-22934 *
NASA-CASE-ARC-10196-1	c 18	N73-13562 *	NASA-CASE-ARC-10911-1	c 35	N77-20400 *	NASA-CASE-ARC-11363-1	c 31	N83-28281 *
NASA-CASE-ARC-10197-1	c 33	N74-17929 *	NASA-CASE-ARC-10912-1	c 34	N77-19353 *	NASA-CASE-ARC-11367-1	c 33	N83-21238 *
NASA-CASE-ARC-10198	c 34	N78-17336 *	NASA-CASE-ARC-10913-1	c 24	N78-15180 *	NASA-CASE-ARC-11368-1	c 27	N83-31854 *
NASA-CASE-ARC-10199	c 34	N78-17337 *	NASA-CASE-ARC-10915-2	c 27	N79-18052 *	NASA-CASE-ARC-11368-2	c 27	N85-21347 *
NASA-CASE-ARC-10263-1	c 14	N72-22438 *	NASA-CASE-ARC-10916-1	c 52	N78-10686 *	NASA-CASE-ARC-11368-3	c 27	N84-22745 *
NASA-CASE-ARC-10264-1	c 09	N73-20231 *	NASA-CASE-ARC-10917-1	c 51	N78-27733 *	NASA-CASE-ARC-11370-1	c 27	N84-22750 *
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NASA-CASE-ARC-10269-1	c 10	N72-16172 *	NASA-CASE-ARC-10974-1	c 34	N77-27345 *	NASA-CASE-ARC-11402-1	c 27	N84-22744 *
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NASA-CASE-ARC-10302-1	c 51	N74-15778 *	NASA-CASE-ARC-10977-1	c 07	N80-32392 *	NASA-CASE-ARC-11405-2	c 27	N86-19455 *
NASA-CASE-ARC-10304-1	c 18	N73-26572 *	NASA-CASE-ARC-10979-1	c 09	N77-19076 *	NASA-CASE-ARC-11413-1	c 27	N85-21348 *
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NASA-CASE-ARC-10344-2	c 35	N75-26334 *	NASA-CASE-ARC-10992-1	c 26	N78-32229 *	NASA-CASE-ARC-11422-1	c 35	N86-20751 *
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NASA-CASE-ARC-10442-1	c 35	N74-15093 *	NASA-CASE-ARC-11039-1	c 74	N78-32854 *	NASA-CASE-ARC-11428-1	c 23	N86-19376 *
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NASA-CASE-ARC-11511-1	c 23	N84-16259 *	#	NASA-CASE-ERC-10338	c 04	N72-33072 *	#	NASA-CASE-GSC-10350-1	c 44	N82-24642 *	#
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NASA-CASE-ARC-11533-1	c 27	N85-21364 *	#	NASA-CASE-ERC-10403-1	c 10	N73-26228 *	#	NASA-CASE-GSC-10441-1	c 14	N71-27325 *	#
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NASA-CASE-ARC-11536-1	c 33	N85-30202 *	#	NASA-CASE-ERC-10439	c 02	N73-19004 *	#	NASA-CASE-GSC-10503-1	c 14	N72-20381 *	#
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NASA-CASE-ARC-11538-1SB	c 24	N86-21590 *	#	NASA-CASE-ERC-10552	c 09	N71-12539 *	#	NASA-CASE-GSC-10518-1	c 15	N72-22489 *	#
NASA-CASE-ARC-11543-1	c 54	N85-21986 *	#	NASA-CASE-ERC-11020	c 14	N71-26774 *	#	NASA-CASE-GSC-10553-1	c 07	N71-19854 *	#
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NASA-CASE-ARC-11547-1	c 36	N85-20320 *	#	NASA-CASE-FRC-10005	c 15	N71-26145 *	#	NASA-CASE-GSC-10555-1	c 21	N71-27324 *	#
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NASA-CASE-ARC-11813-1	c 33	N85-29150 *	#	NASA-CASE-FRC-10029-2	c 05	N72-25121 *	#	NASA-CASE-GSC-10566-1	c 15	N72-18477 *	#
NASA-CASE-ARC-11815-1-SB	c 24	N85-28976 *	#	NASA-CASE-FRC-10029	c 09	N71-24618 *	#	NASA-CASE-GSC-10590-1	c 31	N73-14853 *	#
NASA-CASE-ARC-11815-1SB	c 24	N86-28131 *	#	NASA-CASE-FRC-10036	c 09	N72-22200 *	#	NASA-CASE-GSC-10607-1	c 15	N72-20442 *	#
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NASA-CASE-ARC-11820-1	c 37	N86-21859 *	#	NASA-CASE-FRC-10051-1	c 35	N74-13129 *	#	NASA-CASE-GSC-10656-1	c 09	N72-25249 *	#
NASA-CASE-ARC-11822-1	c 44	N86-21982 *	#	NASA-CASE-FRC-10053	c 14	N70-35587 *	#	NASA-CASE-GSC-10667-1	c 10	N71-33129 *	#
NASA-CASE-ARC-11831-1	c 34	N85-24935 *	#	NASA-CASE-FRC-10060-1	c 14	N73-27379 *	#	NASA-CASE-GSC-10668-1	c 07	N71-28430 *	#
NASA-CASE-ARC-11833-1	c 08	N86-24700 *	#	NASA-CASE-FRC-10063	c 01	N71-12217 *	#	NASA-CASE-GSC-10689-1	c 03	N72-20031 *	#
NASA-CASE-ARC-11834-1	c 36	N86-24978 *	#	NASA-CASE-FRC-10071-1	c 32	N74-20813 *	#	NASA-CASE-GSC-10695-1	c 09	N72-25259 *	#
NASA-CASE-ARC-14408-1	c 27	N82-33523 *	#	NASA-CASE-FRC-10072-1	c 33	N74-14939 *	#	NASA-CASE-GSC-10700	c 23	N71-30027 *	#
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NASA-CASE-ERC-10014	c 14	N71-28863 *	#	NASA-CASE-FRC-10111-1	c 37	N79-10419 *	#	NASA-CASE-GSC-10786-1	c 10	N72-28241 *	#
NASA-CASE-ERC-10015-2	c 10	N72-27246 *	#	NASA-CASE-FRC-10112-1	c 35	N81-28431 *	#	NASA-CASE-GSC-10791-1	c 15	N73-14469 *	#
NASA-CASE-ERC-10017	c 16	N71-15567 *	#	NASA-CASE-FRC-10113-1	c 33	N80-26599 *	#	NASA-CASE-GSC-10814-1	c 03	N73-20039 *	#
NASA-CASE-ERC-10019	c 16	N71-15551 *	#	NASA-CASE-FRC-10116-1	c 33	N79-23345 *	#	NASA-CASE-GSC-10835-1	c 09	N72-33205 *	#
NASA-CASE-ERC-10020	c 16	N71-26154 *	#	NASA-CASE-FRC-11005-1	c 06	N82-16075 *	#	NASA-CASE-GSC-10878-1	c 10	N72-22236 *	#
NASA-CASE-ERC-10022	c 15	N71-26635 *	#	NASA-CASE-FRC-11007-2	c 05	N82-25277 *	#	NASA-CASE-GSC-10879-1	c 14	N72-25413 *	#
NASA-CASE-ERC-10031	c 12	N71-18603 *	#	NASA-CASE-FRC-11009-1	c 06	N80-18036 *	#	NASA-CASE-GSC-10880-1	c 08	N72-11172 *	#
NASA-CASE-ERC-10032	c 10	N71-25900 *	#	NASA-CASE-FRC-11012-1	c 52	N80-23969 *	#	NASA-CASE-GSC-10890-1	c 21	N73-30640 *	#
NASA-CASE-ERC-10033	c 14	N71-26672 *	#	NASA-CASE-FRC-11013-1	c 43	N81-17499 *	#	NASA-CASE-GSC-10891-1	c 10	N71-26626 *	#
NASA-CASE-ERC-10034	c 15	N71-24896 *	#	NASA-CASE-FRC-11014-1	c 33	N82-18494 *	#	NASA-CASE-GSC-10903-1	c 14	N73-12444 *	#
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NASA-CASE-ERC-10044-1	c 14	N71-27090 *	#	NASA-CASE-FRC-11025-1	c 33	N82-24417 *	#	NASA-CASE-GSC-10945-1	c 21	N72-31637 *	#
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NASA-CASE-ERC-10046	c 10	N71-18722 *	#	NASA-CASE-FRC-11029-1	c 06	N81-17057 *	#	NASA-CASE-GSC-10975-1	c 08	N73-13187 *	#
NASA-CASE-ERC-10048	c 09	N72-25251 *	#	NASA-CASE-FRC-11041-1	c 33	N82-18493 *	#	NASA-CASE-GSC-10984-1	c 37	N75-26371 *	#
NASA-CASE-ERC-10065	c 09	N71-27364 *	#	NASA-CASE-FRC-11042-1	c 60	N82-24839 *	#	NASA-CASE-GSC-10990-1	c 09	N73-26195 *	#
NASA-CASE-ERC-10072	c 09	N70-11148 *	#	NASA-CASE-FRC-11043-1	c 06	N83-33882 *	#	NASA-CASE-GSC-11013-1	c 09	N73-18234 *	#
NASA-CASE-ERC-10073-1	c 24	N74-19769 *	#	NASA-CASE-FRC-11044-1	c 37	N81-33483 *	#	NASA-CASE-GSC-11018-1	c 31	N73-30829 *	#
NASA-CASE-ERC-10075-2	c 09	N72-22196 *	#	NASA-CASE-FRC-11052-1	c 04	N82-23231 *	#	NASA-CASE-GSC-11046-1	c 07	N73-28013 *	#
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NASA-CASE-ERC-10081	c 14	N72-28437 *	#	NASA-CASE-FRC-11058-1	c 85	N82-33288 *	#	NASA-CASE-GSC-11074-1	c 14	N73-28489 *	#
NASA-CASE-ERC-10087-2	c 14	N72-31446 *	#	NASA-CASE-FRC-11062-1	c 71	N82-16800 *	#	NASA-CASE-GSC-11077-1	c 02	N73-13008 *	#
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NASA-CASE-ERC-10089	c 23	N72-17747 *	#	NASA-CASE-FRC-11072-1	c 05	N83-27975 *	#	NASA-CASE-GSC-11095-1	c 14	N72-10375 *	#
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NASA-CASE-ERC-10098	c 09	N71-28618 *	#	NASA-CASE-GSC-10017-1	c 44	N82-24643 *	#	NASA-CASE-GSC-11133-1	c 23	N72-11568 *	#
NASA-CASE-ERC-10100	c 09	N71-33519 *	#	NASA-CASE-GSC-10018-1	c 44	N82-24644 *	#	NASA-CASE-GSC-11139	c 09	N71-27016 *	#
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NASA-CASE-ERC-10138	c 26	N71-14354 *	#	NASA-CASE-GSC-10065-1	c 10	N71-27136 *	#	NASA-CASE-GSC-11188-3	c 74	N74-20008 *	#
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NASA-CASE-ERC-10151	c 16	N71-29131 *	#	NASA-CASE-GSC-10083-1	c 30	N71-16090 *	#	NASA-CASE-GSC-11214-1	c 06	N73-13128 *	#
NASA-CASE-ERC-10174	c 14	N72-25409 *	#	NASA-CASE-GSC-10087-1	c 02	N71-19287 *	#	NASA-CASE-GSC-11215-1	c 09	N73-28083 *	#
NASA-CASE-ERC-10178	c 16	N71-24832 *	#	NASA-CASE-GSC-10087-2	c 21	N71-13958 *	#	NASA-CASE-GSC-11222-1	c 16	N73-32391 *	#
NASA-CASE-ERC-10179	c 07	N72-20141 *	#	NASA-CASE-GSC-10087-3	c 07	N72-12080 *	#	NASA-CASE-GSC-11239-1	c 10	N73-25241 *	#
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NASA-CASE-ERC-10187	c 16	N69-31343 *	#	NASA-CASE-GSC-10097-1	c 08	N71-27210 *	#	NASA-CASE-GSC-11291-1	c 25	N72-33696 *	#
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NASA-CASE-ERC-10222	c 09	N72-22199 *	#	NASA-CASE-GSC-10131-1	c 07	N71-24624 *	#	NASA-CASE-GSC-11304-1	c 06	N72-21105 *	#
NASA-CASE-ERC-10224-2	c 09	N73-27150 *	#	NASA-CASE-GSC-10135	c 33	N78-17296 *	#	NASA-CASE-GSC-11340-1	c 10	N72-32320 *	#
NASA-CASE-ERC-10224	c 09	N72-25261 *	#	NASA-CASE-GSC-10185-1	c 07	N72-12081 *	#	NASA-CASE-GSC-11353-1	c 74	N74-21304 *	#
NASA-CASE-ERC-10226-1	c 14	N73-16483 *	#	NASA-CASE-GSC-10186	c 08	N71-33110 *	#	NASA-CASE-GSC-11358-1	c 06	N73-26100 *	#
NASA-CASE-ERC-10248	c 14	N72-17323 *	#	NASA-CASE-GSC-10188-1	c 23	N71-24725 *	#	NASA-CASE-GSC-11367-1	c 44	N74-19692 *	#
NASA-CASE-ERC-10267	c 09	N72-23173 *	#	NASA-CASE-GSC-10216-1	c 23	N71-26722 *	#	NASA-CASE-GSC-1136			



NASA-CASE-GSC-11434-1	c 34	N74-27859 *	#	NASA-CASE-GSC-12150-1	c 32	N79-11265 *	#	NASA-CASE-GSC-12816-1	c 76	N86-20150 *	#
NASA-CASE-GSC-11444-1	c 14	N73-28490 *	#	NASA-CASE-GSC-12158-1	c 51	N83-27569 *	#	NASA-CASE-GSC-12817-1	c 33	N85-29146 *	#
NASA-CASE-GSC-11445-1	c 31	N74-27902 *	#	NASA-CASE-GSC-12168-1	c 31	N79-17029 *	#	NASA-CASE-GSC-12818-1	c 33	N85-29147 *	#
NASA-CASE-GSC-11446-1	c 33	N74-20860 *	#	NASA-CASE-GSC-12171-1	c 33	N79-28416 *	#	NASA-CASE-GSC-12825-1	c 74	N85-20868 *	#
NASA-CASE-GSC-11479-1	c 35	N74-28097 *	#	NASA-CASE-GSC-12173-1	c 51	N79-10694 *	#	NASA-CASE-GSC-12825-1	c 74	N86-28732 *	#
NASA-CASE-GSC-11487-1	c 14	N73-30393 *	#	NASA-CASE-GSC-12190-1	c 33	N79-12321 *	#	NASA-CASE-GSC-12849-1	c 74	N86-26190 *	#
NASA-CASE-GSC-11492-1	c 35	N74-26949 *	#	NASA-CASE-GSC-12191-1	c 31	N80-32583 *	#	NASA-CASE-GSC-12851-1	c 35	N85-30281 *	#
NASA-CASE-GSC-11513-1	c 33	N74-20862 *	#	NASA-CASE-GSC-12194-2	c 20	N82-18314 *	#	NASA-CASE-GSC-12880-1	c 26	N84-20670 *	#
NASA-CASE-GSC-11514-1	c 03	N72-24037 *	#	NASA-CASE-GSC-12207-1	c 24	N79-14156 *	#	NASA-CASE-GSC-12880-1	c 26	N86-32550 *	#
NASA-CASE-GSC-11531-1	c 52	N74-27566 *	#	NASA-CASE-GSC-12219-1	c 35	N80-18359 *	#	NASA-CASE-GSC-12883-1	c 27	N85-29044 *	#
NASA-CASE-GSC-11533-1	c 14	N73-13435 *	#	NASA-CASE-GSC-12223-1	c 60	N83-25378 *	#	NASA-CASE-GSC-12892-1	c 32	N85-20226 *	#
NASA-CASE-GSC-11551-1	c 37	N76-18459 *	#	NASA-CASE-GSC-12225-1	c 74	N79-14891 *	#	NASA-CASE-GSC-12897-1	c 74	N84-25450 *	#
NASA-CASE-GSC-11553-1	c 35	N74-15831 *	#	NASA-CASE-GSC-12228-1	c 33	N79-10338 *	#	NASA-CASE-GSC-12899-1	c 33	N86-20669 *	#
NASA-CASE-GSC-11560-1	c 33	N74-20861 *	#	NASA-CASE-GSC-12237-1	c 36	N80-14384 *	#	NASA-CASE-GSC-12911-1	c 35	N84-25016 *	#
NASA-CASE-GSC-11569-1	c 89	N74-30886 *	#	NASA-CASE-GSC-12253-1	c 34	N79-31523 *	#	NASA-CASE-GSC-12911-1	c 74	N86-29650 *	#
NASA-CASE-GSC-11571-1	c 36	N77-25499 *	#	NASA-CASE-GSC-12263-1	c 74	N79-20857 *	#	NASA-CASE-GSC-12944-1	c 52	N86-19885 *	#
NASA-CASE-GSC-11577-1	c 37	N75-15992 *	#	NASA-CASE-GSC-12273-1	c 35	N80-21719 *	#	NASA-CASE-GSC-12956-1	c 35	N86-20754 *	#
NASA-CASE-GSC-11577-3	c 24	N79-25143 *	#	NASA-CASE-GSC-12274-1	c 37	N79-28550 *	#	NASA-CASE-GSC-12957-1	c 37	N86-20804 *	#
NASA-CASE-GSC-11582-1	c 33	N75-19517 *	#	NASA-CASE-GSC-12289-1	c 37	N80-32717 *	#	NASA-CASE-GSC-12958-1	c 33	N85-30201 *	#
NASA-CASE-GSC-11600-1	c 35	N74-21019 *	#	NASA-CASE-GSC-12291-1	c 76	N80-18951 *	#	NASA-CASE-GSC-12958-1	c 33	N86-32624 *	#
NASA-CASE-GSC-11602-1	c 33	N74-21850 *	#	NASA-CASE-GSC-12297-1	c 37	N79-28549 *	#	NASA-CASE-GSC-12961-1	c 33	N86-20679 *	#
NASA-CASE-GSC-11617-1	c 33	N74-32660 *	#	NASA-CASE-GSC-12303-1	c 24	N79-31347 *	#	NASA-CASE-GSC-12970-1	c 08	N86-20396 *	#
NASA-CASE-GSC-11619-1	c 34	N75-12222 *	#	NASA-CASE-GSC-12318-1	c 37	N80-23655 *	#	NASA-CASE-GSC-13008-1	c 27	N86-32570 *	#
NASA-CASE-GSC-11620-1	c 34	N74-23039 *	#	NASA-CASE-GSC-12321-1	c 36	N82-16396 *	#				
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NASA-CASE-GSC-11623-1	c 33	N75-25040 *	#	NASA-CASE-GSC-12324-1	c 33	N81-33403 *	#	NASA-CASE-HQN-00936	c 31	N71-29050 *	#
NASA-CASE-GSC-11743-1	c 32	N75-24981 *	#	NASA-CASE-GSC-12331-1	c 18	N80-14183 *	#	NASA-CASE-HQN-00937	c 07	N71-28979 *	#
NASA-CASE-GSC-11744-1	c 33	N75-26243 *	#	NASA-CASE-GSC-12334-1	c 36	N79-14362 *	#	NASA-CASE-HQN-00938	c 33	N71-29053 *	#
NASA-CASE-GSC-11746-1	c 36	N75-19654 *	#	NASA-CASE-GSC-12347-1	c 33	N80-18286 *	#	NASA-CASE-HQN-10037-1	c 14	N73-27376 *	#
NASA-CASE-GSC-11752-1	c 77	N75-20140 *	#	NASA-CASE-GSC-12348-1	c 74	N80-24149 *	#	NASA-CASE-HQN-10069	c 33	N75-27251 *	#
NASA-CASE-GSC-11760-1	c 33	N75-19516 *	#	NASA-CASE-GSC-12354-1	c 35	N82-24471 *	#	NASA-CASE-HQN-10274-1	c 27	N82-29451 *	#
NASA-CASE-GSC-11782-1	c 74	N76-30053 *	#	NASA-CASE-GSC-12357-1	c 74	N80-21140 *	#	NASA-CASE-HQN-10328-2	c 27	N82-29454 *	#
NASA-CASE-GSC-11783-1	c 33	N75-19516 *	#	NASA-CASE-GSC-12360-1	c 33	N81-19392 *	#	NASA-CASE-HQN-10364	c 06	N71-27363 *	#
NASA-CASE-GSC-11786-1	c 24	N76-24363 *	#	NASA-CASE-GSC-12365-1	c 32	N80-28578 *	#	NASA-CASE-HQN-10439	c 21	N72-21624 *	#
NASA-CASE-GSC-11789-1	c 33	N77-14333 *	#	NASA-CASE-GSC-12399-1	c 33	N81-25299 *	#	NASA-CASE-HQN-10462	c 25	N75-29192 *	#
NASA-CASE-GSC-11824-1	c 33	N77-26386 *	#	NASA-CASE-GSC-12411-1	c 33	N81-14221 *	#	NASA-CASE-HQN-10537-1	c 06	N72-10138 *	#
NASA-CASE-GSC-11829-1	c 35	N75-27331 *	#	NASA-CASE-GSC-12415-1	c 33	N82-24419 *	#	NASA-CASE-HQN-10541-1	c 07	N71-26291 *	#
NASA-CASE-GSC-11839-1	c 60	N77-14751 *	#	NASA-CASE-GSC-12420-1	c 33	N82-16340 *	#	NASA-CASE-HQN-10541-2	c 15	N71-27135 *	#
NASA-CASE-GSC-11839-2	c 80	N78-10709 *	#	NASA-CASE-GSC-12429-1	c 37	N81-14320 *	#	NASA-CASE-HQN-10541-3	c 23	N72-23695 *	#
NASA-CASE-GSC-11839-3	c 60	N77-32731 *	#	NASA-CASE-GSC-12430-1	c 60	N82-16747 *	#	NASA-CASE-HQN-10541-4	c 16	N71-27183 *	#
NASA-CASE-GSC-11844-1	c 33	N75-19522 *	#	NASA-CASE-GSC-12447-2	c 60	N84-28491 *	#	NASA-CASE-HQN-10542-1	c 74	N75-25706 *	#
NASA-CASE-GSC-11849-1	c 33	N76-16332 *	#	NASA-CASE-GSC-12508-1	c 04	N84-22546 *	#	NASA-CASE-HQN-10595-1	c 27	N82-29455 *	#
NASA-CASE-GSC-11862-1	c 32	N76-18295 *	#	NASA-CASE-GSC-12513-1	c 31	N81-19343 *	#	NASA-CASE-HQN-10638-1	c 15	N73-30460 *	#
NASA-CASE-GSC-11868-1	c 17	N76-22245 *	#	NASA-CASE-GSC-12515-1	c 33	N81-26360 *	#	NASA-CASE-HQN-10654-1	c 16	N73-13489 *	#
NASA-CASE-GSC-11877-1	c 74	N76-18913 *	#	NASA-CASE-GSC-12517-1	c 37	N83-32067 *	#	NASA-CASE-HQN-10683	c 14	N71-34389 *	#
NASA-CASE-GSC-11883-1	c 37	N77-19458 *	#	NASA-CASE-GSC-12518-1	c 33	N82-24421 *	#	NASA-CASE-HQN-10703	c 21	N73-13643 *	#
NASA-CASE-GSC-11883-2	c 37	N78-31426 *	#	NASA-CASE-GSC-12528-1	c 74	N81-24900 *	#	NASA-CASE-HQN-10740-1	c 72	N74-19310 *	#
NASA-CASE-GSC-11889-1	c 35	N76-16393 *	#	NASA-CASE-GSC-12550-1	c 37	N84-28082 *	#	NASA-CASE-HQN-10756-1	c 14	N72-25428 *	#
NASA-CASE-GSC-11892-1	c 35	N76-15433 *	#	NASA-CASE-GSC-12551-1	c 18	N83-28064 *	#	NASA-CASE-HQN-10780	c 14	N71-30265 *	#
NASA-CASE-GSC-11893-1	c 35	N76-31489 *	#	NASA-CASE-GSC-12553-1	c 34	N83-28356 *	#	NASA-CASE-HQN-10781	c 23	N71-30292 *	#
NASA-CASE-GSC-11895-1	c 35	N76-15436 *	#	NASA-CASE-GSC-12555-1	c 33	N86-19515 *	#	NASA-CASE-HQN-10790-1	c 36	N74-11313 *	#
NASA-CASE-GSC-11898-1	c 32	N77-30309 *	#	NASA-CASE-GSC-12558-1	c 36	N85-21639 *	#	NASA-CASE-HQN-10792-1	c 33	N74-11049 *	#
NASA-CASE-GSC-11902-1	c 38	N77-17495 *	#	NASA-CASE-GSC-12560-1	c 52	N82-29863 *	#	NASA-CASE-HQN-10832-1	c 71	N74-21014 *	#
NASA-CASE-GSC-11909	c 32	N74-20863 *	#	NASA-CASE-GSC-12565-1	c 36	N84-14509 *	#	NASA-CASE-HQN-10841-1	c 73	N78-19920 *	#
NASA-CASE-GSC-11917-2	c 51	N76-29891 *	#	NASA-CASE-GSC-12566-1	c 33	N83-34189 *	#	NASA-CASE-HQN-10844-1	c 36	N75-19653 *	#
NASA-CASE-GSC-11924-1	c 33	N76-27472 *	#	NASA-CASE-GSC-12567-1	c 33	N84-22887 *	#	NASA-CASE-HQN-10862-1	c 44	N76-29699 *	#
NASA-CASE-GSC-11925-1	c 33	N76-18353 *	#	NASA-CASE-GSC-12582-2	c 37	N85-20337 *	#	NASA-CASE-HQN-10876-1	c 33	N76-27473 *	#
NASA-CASE-GSC-11960-1	c 37	N77-14479 *	#	NASA-CASE-GSC-12584-1	c 37	N82-32730 *	#	NASA-CASE-HQN-10880-1	c 17	N78-17140 *	#
NASA-CASE-GSC-11963-1	c 33	N77-10429 *	#	NASA-CASE-GSC-12587-1	c 35	N82-32659 *	#	NASA-CASE-HQN-10888-1	c 44	N79-14527 *	#
NASA-CASE-GSC-11968-1	c 32	N76-15329 *	#	NASA-CASE-GSC-12592-1	c 36	N84-28065 *	#	NASA-CASE-HQN-10931-2	c 27	N82-29452 *	#
NASA-CASE-GSC-11974-1	c 37	N77-19458 *	#	NASA-CASE-GSC-12595-1	c 33	N82-24422 *	#				
NASA-CASE-GSC-11975-1	c 37	N77-19458 *	#	NASA-CASE-GSC-12608-1	c 74	N83-10900 *	#	NASA-CASE-KSC-10002	c 10	N71-25865 *	#
NASA-CASE-GSC-11976-1	c 43	N78-10529 *	#	NASA-CASE-GSC-12609-1	c 36	N81-22344 *	#	NASA-CASE-KSC-10003	c 10	N73-13235 *	#
NASA-CASE-GSC-11978-1	c 37	N77-17464 *	#	NASA-CASE-GSC-12609-2	c 36	N83-29681 *	#	NASA-CASE-KSC-10020	c 10	N71-27338 *	#
NASA-CASE-GSC-11989-1	c 74	N77-28932 *	#	NASA-CASE-GSC-12614-1	c 37	N83-32577 *	#	NASA-CASE-KSC-10031	c 15	N72-22486 *	#
NASA-CASE-GSC-11998-1	c 34	N77-32413 *	#	NASA-CASE-GSC-12619-1	c 37	N84-12491 *	#	NASA-CASE-KSC-10108	c 14	N73-25461 *	#
NASA-CASE-GSC-12010-1	c 74	N78-18905 *	#	NASA-CASE-GSC-12622-1	c 37	N84-12492 *	#	NASA-CASE-KSC-10126	c 11	N71-24985 *	#
NASA-CASE-GSC-12017-1	c 32	N77-30308 *	#	NASA-CASE-GSC-12630-1	c 33	N83-36355 *	#	NASA-CASE-KSC-10162	c 09	N72-11225 *	#
NASA-CASE-GSC-12018-1	c 33	N77-14334 *	#	NASA-CASE-GSC-12636-1	c 31	N83-27058 *	#	NASA-CASE-KSC-10164	c 07	N71-33108 *	#
NASA-CASE-GSC-12022-1	c 44	N76-28635 *	#	NASA-CASE-GSC-12640-1	c 74	N84-11920 *	#	NASA-CASE-KSC-10198	c 11	N71-28629 *	#
NASA-CASE-GSC-12022-2	c 44	N78-24609 *	#	NASA-CASE-GSC-12643-1	c 37	N83-26078 *	#	NASA-CASE-KSC-10242	c 15	N72-23497 *	#
NASA-CASE-GSC-12023-1	c 44	N76-28635 *	#	NASA-CASE-GSC-12645-1	c 33	N84-16454 *	#	NASA-CASE-KSC-10278	c 05	N72-16015 *	#
NASA-CASE-GSC-12030-1	c 44	N78-24608 *	#	NASA-CASE-GSC-12646-1	c 33	N83-34191 *	#	NASA-CASE-KSC-10294	c 14	N72-18411 *	#
NASA-CASE-GSC-12032-2	c 43	N82-13465 *	#	NASA-CASE-GSC-12650-1	c 33	N84-14421 *	#	NASA-CASE-KSC-10326	c 08	N72-21197 *	#
NASA-CASE-GSC-12039-1	c 51	N77-22794 *	#	NASA-CASE-GSC-12652-1	c 52	N84-34913 *	#	NASA-CASE-KSC-10392	c 07	N73-26117 *	#
NASA-CASE-GSC-12044-1	c 60	N78-17691 *	#	NASA-CASE-GSC-12682-1	c 35	N84-33765 *	#	NASA-CASE-KSC-10393	c 09	N72-21247 *	#
NASA-CASE-GSC-12046-1	c 52	N79-14750 *	#	NASA-CASE-GSC-12683-1	c 74	N83-36898 *	#	NASA-CASE-KSC-10397	c 08	N72-25206 *	#
NASA-CASE-GSC-12053-1	c 32	N77-28346 *	#	NASA-CASE-GSC-12686-1	c 27	N83-34039 *	#	NASA-CASE-KSC-10513	c 15	N72-25453 *	#
NASA-CASE-GSC-12058-1	c 74	N77-26942 *	#	NASA-CASE-GSC-12697-1	c 31	N82-11312 *	#	NASA-CASE-KSC-10521	c 07	N73-20176 *	#
NASA-CASE-GSC-12059-1	c 35	N77-27366 *	#	NASA-CASE-GSC-12697-2	c 44	N83-28574 *	#	NASA-CASE-KSC-10565	c 09	N72-25250 *	#
NASA-CASE-GSC-12075-1	c 32	N77-31350 *	#	NASA-CASE-GSC-12726-1	c 37	N83-34323 *	#	NASA-CASE-KSC-10595	c 08	N73-12176 *	#
NASA-CASE-GSC-12077-1	c 35	N77-24455 *	#	NASA-CASE-GSC-12756-1	c 74	N84-23248 *	#	NASA-CASE-KSC-10615	c 15	N73-12486 *	#
NASA-CASE-GSC-12081-2	c 52	N82-22875 *	#	NASA-CASE-GSC-12761-1	c 74	N83-13982 *	#	NASA-CASE-KSC-10622-1	c 31	N72-21893 *	#
NASA-CASE-GSC-12082-1	c 54	N76-22914 *	#	NASA-CASE-GSC-12762-1	c 74	N86-32266 *	#	NASA-CASE-KSC-10626	c 14	N73-27378 *	#
NASA-CASE-GSC-12082-2	c 52	N81-25661 *	#	NASA-CASE-GSC-12770-1	c 35	N84-28083 *	#	NASA-CASE-KSC-10639	c 15	N73-26472 *	#
NASA-CASE-GSC-12083-1	c 73	N78-32848 *	#	NASA-CASE-GSC-12771-1	c 24	N83-29324 *	#	NASA-CASE-KSC-10644	c 09	N72-27227 *	#
NASA-CASE-GSC-12088-1	c 74	N78-13874 *	#	NASA-CASE-GSC-12771-1	c 35	N84-14461 *	#	NASA-CASE-KSC-10647-1	c 10	N72-31273 *	#
NASA-CASE-GSC-12110-1	c 27	N77-32308 *	#	NASA-CASE-GSC-12782-1	c 33	N83-13360 *	#	NASA-CASE-KSC-10654-1	c 07	N73-30115 *	#
NASA-CASE-GSC-12111-2	c 33	N81-29342 *	#	NASA-CASE-GSC-12788-1	c 33	N85-29145 *	#	NASA-CASE-KSC-10698	c 07	N73-20175 *	#
NASA-CASE-GSC-12115-1	c 62	N76-31946 *	#	NASA-CASE-GSC-12789-1	c 35	N85-20294 *	#	NASA-CASE-KSC-10723-1	c 37	N75-13265 *	

NASA-CASE-KSC-10769-1	c 33	N74-29556 *	#	NASA-CASE-LAR-10385-3	c 74	N78-15879 *	#	NASA-CASE-LAR-11155-1	c 35	N74-15091 *	#
NASA-CASE-KSC-10782-1	c 33	N75-30431 *	#	NASA-CASE-LAR-10403	c 21	N71-11766 *	#	NASA-CASE-LAR-11173-1	c 35	N75-19614 *	#
NASA-CASE-KSC-10807-1	c 33	N75-26248 *	#	NASA-CASE-LAR-10409-1	c 31	N74-21059 *	#	NASA-CASE-LAR-11201-1	c 35	N78-24515 *	#
NASA-CASE-KSC-10834-1	c 33	N76-14371 *	#	NASA-CASE-LAR-10416-1	c 24	N74-30001 *	#	NASA-CASE-LAR-11207-1	c 35	N75-19613 *	#
NASA-CASE-KSC-10849-1	c 52	N77-14738 *	#	NASA-CASE-LAR-10423-1	c 23	N82-29358 *	#	NASA-CASE-LAR-11208-1	c 44	N78-32539 *	#
NASA-CASE-KSC-10899-1	c 33	N79-18193 *	#	NASA-CASE-LAR-10426-1	c 09	N74-19528 *	#	NASA-CASE-LAR-11211-1	c 37	N75-12326 *	#
NASA-CASE-KSC-11004-1	c 54	N77-30749 *	#	NASA-CASE-LAR-10439-1	c 33	N73-27798 *	#	NASA-CASE-LAR-11213-1	c 35	N75-15014 *	#
NASA-CASE-KSC-11008-1	c 33	N79-22373 *	#	NASA-CASE-LAR-10440-1	c 14	N73-32323 *	#	NASA-CASE-LAR-11224-1	c 37	N78-18456 *	#
NASA-CASE-KSC-11010-1	c 74	N79-12890 *	#	NASA-CASE-LAR-10450-1	c 37	N74-27905 *	#	NASA-CASE-LAR-11237-1	c 35	N75-19612 *	#
NASA-CASE-KSC-11018-1	c 33	N79-10337 *	#	NASA-CASE-LAR-10483-1	c 14	N73-32327 *	#	NASA-CASE-LAR-11252-1	c 05	N75-25914 *	#
NASA-CASE-KSC-11023-1	c 32	N79-23310 *	#	NASA-CASE-LAR-10489-1	c 31	N74-18124 *	#	NASA-CASE-LAR-11263-1	c 35	N75-33369 *	#
NASA-CASE-KSC-11025-1	c 32	N83-13323 *	#	NASA-CASE-LAR-10489-2	c 31	N74-32920 *	#	NASA-CASE-LAR-11310-1	c 07	N77-28118 *	#
NASA-CASE-KSC-11030-1	c 52	N77-25772 *	#	NASA-CASE-LAR-10496-1	c 14	N72-22437 *	#	NASA-CASE-LAR-11328-1	c 35	N75-33368 *	#
NASA-CASE-KSC-11031-1	c 33	N79-11315 *	#	NASA-CASE-LAR-10503-1	c 09	N72-21248 *	#	NASA-CASE-LAR-11341-1	c 36	N75-19655 *	#
NASA-CASE-KSC-11034-1	c 44	N78-32542 *	#	NASA-CASE-LAR-10507-1	c 11	N72-25284 *	#	NASA-CASE-LAR-11352-1	c 33	N75-26245 *	#
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NASA-CASE-KSC-11042-1	c 09	N82-29330 *	#	NASA-CASE-LAR-10513-1	c 07	N72-25170 *	#	NASA-CASE-LAR-11361-1	c 44	N77-22607 *	#
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NASA-CASE-LAR-10337-1	c 2										

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NASA-CASE-LAR-12321-1	c 35	N82-24470 *	#	NASA-CASE-LAR-12968-1	c 60	N86-21154 *	#	NASA-CASE-LEW-10281-1	c 14	N72-17327 *	#
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NASA-CASE-LAR-12328-1	c 36	N82-32712 *	#	NASA-CASE-LAR-12979-1	c 05	N85-21147 *	#	NASA-CASE-LEW-10326-3	c 37	N74-10474 *	#
NASA-CASE-LAR-12344-1	c 43	N80-18498 *	#	NASA-CASE-LAR-12980-1	c 27	N84-22749 *	#	NASA-CASE-LEW-10327	c 17	N71-33408 *	#
NASA-CASE-LAR-12361-1	c 37	N83-19091 *	#	NASA-CASE-LAR-12984-1	c 06	N84-20522 *	#	NASA-CASE-LEW-10330-1	c 09	N72-27226 *	#
NASA-CASE-LAR-12363-1	c 35	N82-31659 *	#	NASA-CASE-LAR-12995-1	c 35	N84-22933 *	#	NASA-CASE-LEW-10345-1	c 10	N71-25899 *	#
NASA-CASE-LAR-12363-2	c 33	N83-24763 *	#	NASA-CASE-LAR-13006-1	c 17	N83-20995 *	#	NASA-CASE-LEW-10359-2	c 33	N73-25952 *	#
NASA-CASE-LAR-12372-1	c 37	N82-18601 *	#	NASA-CASE-LAR-13009-1	c 37	N85-29285 *	#	NASA-CASE-LEW-10359	c 33	N72-25911 *	#
NASA-CASE-LAR-12375-1	c 32	N79-24203 *	#	NASA-CASE-LAR-13014-1	c 09	N85-21178 *	#	NASA-CASE-LEW-10364-1	c 09	N71-13522 *	#
NASA-CASE-LAR-12393-1	c 34	N83-34221 *	#	NASA-CASE-LAR-13019-1	c 07	N85-35194 *	#	NASA-CASE-LEW-10374-1	c 28	N73-13773 *	#
NASA-CASE-LAR-12396-1	c 02	N84-28732 *	#	NASA-CASE-LAR-13028-1	c 52	N85-30618 *	#	NASA-CASE-LEW-10387	c 09	N72-22201 *	#
NASA-CASE-LAR-12406-1	c 05	N81-26114 *	#	NASA-CASE-LAR-13040-1	c 37	N85-29286 *	#	NASA-CASE-LEW-10393-1	c 17	N71-15468 *	#
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NASA-CASE-LAR-12441-1	c 09	N82-32354 *	#	NASA-CASE-LAR-13065-1	c 35	N85-20295 *	#	NASA-CASE-LEW-10433-1	c 09	N72-22197 *	#
NASA-CASE-LAR-12458-1	c 44	N83-21503 *	#	NASA-CASE-LAR-13076-1	c 27	N86-20564 *	#	NASA-CASE-LEW-10436-1	c 17	N73-32415 *	#
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NASA-CASE-LAR-12471-1	c 52	N82-29862 *	#	NASA-CASE-LAR-13100-1	c 37	N86-24993 *	#	NASA-CASE-LEW-10518-3	c 25	N78-27226 *	#
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NASA-CASE-LAR-12495-1	c 44	N83-28573 *	#	NASA-CASE-LAR-13117-1	c 37	N86-25789 *	#	NASA-CASE-LEW-10689-1	c 28	N71-26173 *	#
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NASA-CASE-LAR-12659-1	c 33	N82-26570 *	#	NASA-CASE-LAR-13270-1	c 27	N84-32532 *	#	NASA-CASE-LEW-11076-4	c 37	N76-15461 *	#
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NASA-CASE-LEW-11930-4	c 24	N79-17916 *	#	NASA-CASE-LEW-12785-1	c 37	N78-24545 *	#	NASA-CASE-LEW-13736-1	c 33	N84-27974 *	#
NASA-CASE-LEW-11938-1	c 33	N76-15373 *	#	NASA-CASE-LEW-12791-1	c 33	N78-32341 *	#	NASA-CASE-LEW-13758-1	c 24	N84-27829 *	#
NASA-CASE-LEW-11949-1	c 37	N76-28588 *	#	NASA-CASE-LEW-12793-1	c 37	N79-11403 *	#	NASA-CASE-LEW-13770-1	c 27	N84-27885 *	#
NASA-CASE-LEW-11978-1	c 33	N77-26385 *	#	NASA-CASE-LEW-12806-2	c 44	N81-12542 *	#	NASA-CASE-LEW-13770-2	c 25	N85-28982 *	#
NASA-CASE-LEW-11981-1	c 31	N78-17237 *	#	NASA-CASE-LEW-12819-1	c 44	N79-11467 *	#	NASA-CASE-LEW-13770-3	c 27	N85-21350 *	#
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NASA-CASE-LEW-12013-1	c 33	N79-10339 *	#	NASA-CASE-LEW-12830-1	c 07	N77-23106 *	#	NASA-CASE-LEW-13770-5	c 27	N85-21352 *	#
NASA-CASE-LEW-12039-1	c 44	N78-14625 *	#	NASA-CASE-LEW-12876-2	c 27	N83-29392 *	#	NASA-CASE-LEW-13770-6	c 25	N85-30039 *	#
NASA-CASE-LEW-12048-1	c 20	N77-20162 *	#	NASA-CASE-LEW-12892-1	c 44	N83-14692 *	#	NASA-CASE-LEW-13773-2	c 33	N86-20671 *	#
NASA-CASE-LEW-12050-1	c 35	N77-32454 *	#	NASA-CASE-LEW-12905-1	c 26	N78-18183 *	#	NASA-CASE-LEW-13822-1	c 44	N86-25874 *	#
NASA-CASE-LEW-12051-1	c 52	N75-33640 *	#	NASA-CASE-LEW-12906-1	c 26	N77-32279 *	#	NASA-CASE-LEW-13827-1	c 44	N85-21768 *	#
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NASA-CASE-LEW-12078-1	c 35	N75-30503 *	#	NASA-CASE-LEW-12917-1	c 07	N78-18067 *	#	NASA-CASE-LEW-13834-1	c 26	N86-24639 *	#
NASA-CASE-LEW-12081-1	c 28	N78-24365 *	#	NASA-CASE-LEW-12918-1	c 44	N81-24521 *	#	NASA-CASE-LEW-13837-1	c 24	N84-22695 *	#
NASA-CASE-LEW-12081-2	c 28	N80-20402 *	#	NASA-CASE-LEW-12919-1	c 24	N83-10117 *	#	NASA-CASE-LEW-13837-2	c 24	N85-21267 *	#
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NASA-CASE-LEW-12118-1	c 24	N77-27188 *	#	NASA-CASE-LEW-12950-1	c 34	N82-11399 *	#	NASA-CASE-LEW-13923-1	c 26	N85-35267 *	#
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NASA-CASE-LEW-12131-1	c 37	N79-18318 *	#	NASA-CASE-LEW-12971-1	c 07	N80-18039 *	#	NASA-CASE-LEW-13981-2	c 33	N86-21742 *	#
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NASA-CASE-LEW-12137-1	c 25	N78-10224 *	#	NASA-CASE-LEW-12989-1	c 37	N82-12442 *	#	NASA-CASE-LEW-14037-1	c 20	N84-32425 *	#
NASA-CASE-LEW-12159-1	c 44	N78-19599 *	#	NASA-CASE-LEW-12990-1	c 07	N81-29129 *	#	NASA-CASE-LEW-14039-1	c 34	N85-33433 *	#
NASA-CASE-LEW-12164-1	c 36	N77-32478 *	#	NASA-CASE-LEW-12991-1	c 37	N81-24442 *	#	NASA-CASE-LEW-14053-1	c 37	N85-34402 *	#
NASA-CASE-LEW-12174-2	c 35	N79-14346 *	#	NASA-CASE-LEW-12995-1	c 37	N84-33808 *	#	NASA-CASE-LEW-14057-1	c 24	N85-35233 *	#
NASA-CASE-LEW-12185-1	c 44	N78-25528 *	#	NASA-CASE-LEW-13027-1	c 27	N80-24437 *	#	NASA-CASE-LEW-14072-1	c 27	N86-19458 *	#
NASA-CASE-LEW-12217-1	c 43	N78-14452 *	#	NASA-CASE-LEW-13028-1	c 27	N82-33521 *	#	NASA-CASE-LEW-14072-2	c 27	N86-32569 *	#
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NASA-CASE-LEW-12236-2	c 44	N79-14528 *	#	NASA-CASE-LEW-13101-2	c 23	N81-29160 *	#	NASA-CASE-LEW-14080-1	c 31	N85-20153 *	#
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NASA-CASE-LEW-12253-1	c 74	N83-19596 *	#	NASA-CASE-LEW-13107-1	c 52	N83-21785 *	#	NASA-CASE-LEW-14127-1	c 33	N86-20680 *	#
NASA-CASE-LEW-12258-1	c 52	N77-28716 *	#	NASA-CASE-LEW-13107-2	c 52	N84-23095 *	#	NASA-CASE-LEW-14130-1	c 31	N85-20156 *	#
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NASA-CASE-MFS-10068	c 10	N71-25139 *		NASA-CASE-MFS-20418	c 14	N73-24473 *	#	NASA-CASE-MFS-21660-1	c 35	N74-21017 *	#
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NASA-CASE-MFS-11132	c 15	N71-17649 *		NASA-CASE-MFS-20509	c 11	N72-17183 *	#	NASA-CASE-MFS-21761-1	c 35	N75-15931 *	#
NASA-CASE-MFS-11133	c 31	N71-16222 *		NASA-CASE-MFS-20523	c 14	N72-27412 *	#	NASA-CASE-MFS-21846-1	c 37	N74-26976 *	#
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NASA-CASE-MFS-11497	c 28	N71-16224 *		NASA-CASE-MFS-20596	c 14	N72-17324 *	#	NASA-CASE-MFS-22022-1	c 37	N76-15460 *	#
NASA-CASE-MFS-11537	c 14	N71-20442 *		NASA-CASE-MFS-20607-1	c 37	N76-19436 *	#	NASA-CASE-MFS-22039-1	c 09	N75-12968 *	#
NASA-CASE-MFS-12750	c 27	N71-16223 *		NASA-CASE-MFS-20619	c 28	N72-11708 *		NASA-CASE-MFS-22040-1	c 35	N74-26946 *	#
NASA-CASE-MFS-12805	c 15	N71-17805 *		NASA-CASE-MFS-20620	c 11	N72-27262 *	#	NASA-CASE-MFS-22060-1	c 35	N75-29380 *	#
NASA-CASE-MFS-12806	c 14	N71-17588 *		NASA-CASE-MFS-20642	c 14	N72-21407 *	#	NASA-CASE-MFS-22073-1	c 33	N75-13139 *	#
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NASA-CASE-MFS-12915	c 11	N71-17600 *		NASA-CASE-MFS-20658-1	c 14	N73-30086 *	#	NASA-CASE-MFS-22102-1	c 54	N74-20725 *	#
NASA-CASE-MFS-13046	c 07	N71-19433 *		NASA-CASE-MFS-20673	c 14	N73-20476 *	#	NASA-CASE-MFS-22129-1	c 33	N74-18477 *	#
NASA-CASE-MFS-13130	c 10	N72-17173 *	#	NASA-CASE-MFS-20675	c 26	N73-26751 *	#	NASA-CASE-MFS-22133-1	c 33	N74-26977 *	#
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NASA-CASE-MFS-13686	c 15	N71-18132 *		NASA-CASE-MFS-20698	c 15	N72-20446 *	#	NASA-CASE-MFS-22145-2	c 75	N76-17951 *	#
NASA-CASE-MFS-13687-2	c 09	N72-22198 *	#	NASA-CASE-MFS-20710	c 11	N72-23215 *	#	NASA-CASE-MFS-22189-1	c 35	N75-19615 *	#
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NASA-CASE-MFS-13929	c 15	N71-27091 *		NASA-CASE-MFS-20757	c 09	N72-28225 *	#	NASA-CASE-MFS-22234-1	c 32	N79-10264 *	#
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NASA-CASE-MFS-13994-2	c 06	N72-25148 *	#	NASA-CASE-MFS-20761-1	c 44	N74-27519 *	#	NASA-CASE-MFS-22287-1	c 75	N76-14931 *	#
NASA-CASE-MFS-14017	c 14	N71-26627 *	#	NASA-CASE-MFS-20767-1	c 38	N74-15130 *	#	NASA-CASE-MFS-22323-1	c 37	N76-14463 *	#
NASA-CASE-MFS-14023	c 33	N71-25351 *		NASA-CASE-MFS-20774	c 14	N73-19420 *	#	NASA-CASE-MFS-22324-1	c 27	N75-27160 *	#
NASA-CASE-MFS-14114-2	c 09	N71-24807 *		NASA-CASE-MFS-20775-1	c 31	N75-12161 *	#	NASA-CASE-MFS-22342-1	c 33	N75-30428 *	#
NASA-CASE-MFS-14114	c 33	N71-27862 *		NASA-CASE-MFS-20809	c 23	N73-13660 *	#	NASA-CASE-MFS-22343-1	c 33	N74-34638 *	#
NASA-CASE-MFS-14216	c 14	N73-13418 *	#	NASA-CASE-MFS-20823-1	c 16	N73-30476 *	#	NASA-CASE-MFS-22355-1	c 23	N75-15268 *	#
NASA-CASE-MFS-14253	c 33	N71-24858 *		NASA-CASE-MFS-20829	c 12	N72-21310 *	#	NASA-CASE-MFS-22356-1	c 23	N75-30256 *	#
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NASA-CASE-MFS-18100	c 15	N72-11390 *		NASA-CASE-MFS-21042	c 07	N72-25171 *	#	NASA-CASE-MFS-22749-1	c 44	N76-14601 *	#
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NASA-CASE-MFS-19193-1	c 37	N75-19686 *	#	NASA-CASE-MFS-21046-1	c 14	N73-27377 *	#	NASA-CASE-MFS-22787-1	c 15	N77-10113 *	#
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NASA-CASE-MFS-20068	c 07	N71-27191 *		NASA-CASE-MFS-21163-1	c 54	N74-17853 *	#	NASA-CASE-MFS-23008-1	c 35	N78-18390 *	#
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NASA-CASE-MFS-20075	c 09	N71-26133 *		NASA-CASE-MFS-21233-1	c 38	N74-15395 *	#	NASA-CASE-MFS-23051-1	c 37	N79-10422 *	#
NASA-CASE-MFS-20095	c 24	N72-11595 *		NASA-CASE-MFS-21244-1	c 36	N75-15028 *	#	NASA-CASE-MFS-23052-2	c 74	N79-13855 *	#
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NASA-CASE-MFS-20125	c 16	N72-13437 *		NASA-CASE-MFS-21311-1	c 20	N76-21275 *	#	NASA-CASE-MFS-23062-1	c 37	N77-12402 *	#
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NASA-CASE-MFS-20249	c 15	N72-11386 *		NASA-CASE-MFS-21415-1	c 52	N74-20728 *	#	NASA-CASE-MFS-23175-1	c 35	N77-30436 *	#
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NASA-CASE-MFS-20299	c 15	N72-11392 *		NASA-CASE-MFS-21441-1	c 14	N73-30392 *	#	NASA-CASE-MFS-23194-1	c 35	N78-17357 *	#
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NASA-CASE-MFS-20355	c 33	N71-25353 *		NASA-CASE-MFS-21488-1	c 14	N75-24794 *	#	NASA-CASE-MFS-23281-1	c 35	N77-22450 *	#
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NASA-CASE-MFS-20395	c 15	N71-24903 *		NASA-CASE-MFS-21577-1</							



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NASA-CASE-MFS-23349-1	c 44	N79-23481 *	#	NASA-CASE-MFS-25807-2	c 37	N86-21850 *	#	NASA-CASE-MSC-12279-1	c 15	N70-35679 *	#
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NASA-CASE-MFS-23363-1	c 35	N78-32396 *	#	NASA-CASE-MFS-25825-1	c 35	N85-20298 *	#	NASA-CASE-MSC-12280	c 27	N71-16348 *	#
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NASA-CASE-MFS-23460-1	c 12	N79-28075 *	#	NASA-CASE-MFS-25833-1	c 35	N83-21316 *	#	NASA-CASE-MSC-12324-1	c 05	N72-22093 *	#
NASA-CASE-MFS-23461-1	c 35	N79-10389 *	#	NASA-CASE-MFS-25833-1	c 35	N86-32698 *	#	NASA-CASE-MSC-12327-1	c 35	N77-27368 *	#
NASA-CASE-MFS-23506-1	c 24	N78-24290 *	#	NASA-CASE-MFS-25837-1	c 18	N85-29991 *	#	NASA-CASE-MSC-12357	c 15	N73-12489 *	#
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NASA-CASE-MFS-23515-1	c 44	N80-21828 *	#	NASA-CASE-MFS-25843-1	c 20	N83-17588 *	#	NASA-CASE-MSC-12372-1	c 31	N72-25842 *	#
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NASA-CASE-MFS-23518-3	c 44	N80-16452 *	#	NASA-CASE-MFS-25853-1	c 16	N84-27784 *	#	NASA-CASE-MSC-12390	c 27	N71-29155 *	#
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NASA-CASE-MFS-23551-1	c 04	N76-26175 *	#	NASA-CASE-MFS-25862-1	c 27	N85-20126 *	#	NASA-CASE-MSC-12394-1	c 08	N74-10942 *	#
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NASA-CASE-MFS-23642-2	c 20	N78-27176 *	#	NASA-CASE-MFS-25907-1	c 37	N85-34401 *	#	NASA-CASE-MSC-12408-1	c 46	N74-13011 *	#
NASA-CASE-MFS-23646-1	c 37	N79-22474 *	#	NASA-CASE-MFS-25910-1	c 39	N86-20841 *	#	NASA-CASE-MSC-12411-1	c 05	N72-20096 *	#
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NASA-CASE-MFS-23674-1	c 24	N81-29163 *	#	NASA-CASE-MFS-25946-1	c 20	N86-26368 *	#	NASA-CASE-MSC-12428-1	c 10	N73-25240 *	#
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NASA-CASE-MFS-23720-2	c 43	N80-14423 *	#	NASA-CASE-MFS-25968-1	c 16	N86-28352 *	#	NASA-CASE-MSC-12506-1	c 32	N77-12239 *	#
NASA-CASE-MFS-23720-3	c 43	N79-25443 *	#	NASA-CASE-MFS-25978-1	c 44	N84-32913 *	#	NASA-CASE-MSC-12531-1	c 35	N75-30504 *	#
NASA-CASE-MFS-23721-1	c 31	N79-28370 *	#	NASA-CASE-MFS-25981-1	c 35	N85-20299 *	#	NASA-CASE-MSC-12549-1	c 37	N74-27903 *	#
NASA-CASE-MFS-23725-1	c 43	N79-31706 *	#	NASA-CASE-MFS-26000-1	c 74	N84-16986 *	#	NASA-CASE-MSC-12559-1	c 18	N76-14186 *	#
NASA-CASE-MFS-23726-1	c 43	N79-26439 *	#	NASA-CASE-MFS-26002-1	CU	c 35	N86-28598 *	NASA-CASE-MSC-12561-1	c 18	N76-17185 *	#
NASA-CASE-MFS-23727-1	c 44	N80-14473 *	#	NASA-CASE-MFS-26009-1	SB	c 54	N86-22114 *	NASA-CASE-MSC-12568-1	c 24	N76-14204 *	#
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NASA-CASE-MFS-23776-1	c 33	N82-28545 *	#	NASA-CASE-MFS-26008-1	c 37	N85-29289 *	#	NASA-CASE-MSC-12607-1	c 32	N75-21485 *	#
NASA-CASE-MFS-23777-1	c 37	N80-32716 *	#	NASA-CASE-MFS-26013-1	c 35	N85-20300 *	#	NASA-CASE-MSC-12609-1	c 05	N73-32012 *	#
NASA-CASE-MFS-23816-1	c 26	N80-23419 *	#	NASA-CASE-MFS-26030-1	c 89	N86-22459 *	#	NASA-CASE-MSC-12611-1	c 12	N76-15189 *	#
NASA-CASE-MFS-23825-1	c 51	N81-32829 *	#	NASA-CASE-MFS-26044-1	c 35	N86-25752 *	#	NASA-CASE-MSC-12615-1	c 37	N76-19437 *	#
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NASA-CASE-MFS-23830-1	c 44	N82-24639 *	#	NASA-CASE-MFS-26058-1	c 09	N85-28951 *	#	NASA-CASE-MSC-12618-1	c 74	N78-17865 *	#
NASA-CASE-MFS-23845-1	c 33	N81-17348 *	#	NASA-CASE-MFS-26059-1	c 37	N86-19611 *	#	NASA-CASE-MSC-12619-2	c 27	N79-12221 *	#
NASA-CASE-MFS-23846-1	c 37	N82-32731 *	#	NASA-CASE-MFS-26059-1	c 37	N85-29288 *	#	NASA-CASE-MSC-12631-1	c 24	N77-28225 *	#
NASA-CASE-MFS-23862-1	c 48	N80-18667 *	#	NASA-CASE-MFS-26059-1	c 37	N86-32738 *	#	NASA-CASE-MSC-12631-3	c 27	N81-14077 *	#
NASA-CASE-MFS-23863-1	c 51	N80-16715 *	#	NASA-CASE-MFS-26080-1	c 76	N85-30932 *	#	NASA-CASE-MSC-12640-1	c 74	N76-31998 *	#
NASA-CASE-MFS-23923-1	c 35	N81-19426 *	#	NASA-CASE-MFS-26080-1	c 33	N86-20682 *	#	NASA-CASE-MSC-12662-1	c 33	N79-12331 *	#
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NASA-CASE-MFS-23988-1	c 33	N81-27395 *	#	NASA-CASE-MFS-26090-1	c 27	N86-21684 *	#	NASA-CASE-MSC-12731-1	c 37	N78-25426 *	#
NASA-CASE-MFS-23999-1	c 44	N81-24520 *	#	NASA-CASE-MFS-26118-1	c 39	N86-32770 *	#	NASA-CASE-MSC-12737-1	c 24	N79-25142 *	#
NASA-CASE-MFS-24368-3	c 33	N81-22280 *	#	NASA-CASE-MFS-26153-1	c 31	N86-32589 *	#	NASA-CASE-MSC-12743-1	c 32	N79-10263 *	#
NASA-CASE-MFS-25000-1	c 25	N81-19242 *	#	NASA-CASE-MFS-26134-1	c 74	N86-20130 *	#	NASA-CASE-MSC-12745-1	c 33	N81-27397 *	#
NASA-CASE-MFS-25050-1	c 71	N81-15767 *	#					NASA-CASE-MSC-13047-1	c 31	N71-25434 *	#
NASA-CASE-MFS-25134-1	c 31	N83-31895 *	#	NASA-CASE-MRS-25791-1	c 09	N84-27749 *	#	NASA-CASE-MSC-13054	c 54	N78-17677 *	#
NASA-CASE-MFS-25139-1	c 34	N82-13376 *	#					NASA-CASE-MSC-13110-1	c 08	N72-22163 *	#
NASA-CASE-MFS-25181-1	c 27	N82-24340 *	#	NASA-CASE-MSC-10954-1	c 54	N78-18761 *	#	NASA-CASE-MSC-13112	c 03	N71-11057 *	#
NASA-CASE-MFS-25208-1	c 33	N83-10345 *	#	NASA-CASE-MSC-10959	c 15	N71-26243 *	#	NASA-CASE-MSC-13140	c 05	N72-11085 *	#
NASA-CASE-MFS-25209-1	c 33	N83-35227 *	#	NASA-CASE-MSC-10960-1	c 03	N71-24718 *	#	NASA-CASE-MSC-13201-1	c 07	N71-28429 *	#
NASA-CASE-MFS-25211-2	c 33	N84-14423 *	#	NASA-CASE-MSC-10966	c 14	N71-19568 *	#	NASA-CASE-MSC-13276-1	c 14	N71-27058 *	#
NASA-CASE-MFS-25215-1	c 33	N83-19553 *	#	NASA-CASE-MSC-11010	c 15	N71-19485 *	#	NASA-CASE-MSC-13281	c 31	N72-18859 *	#
NASA-CASE-MFS-25242-1	c 35	N83-29650 *	#	NASA-CASE-MSC-11072	c 54	N74-32546 *	#	NASA-CASE-MSC-13282-1	c 05	N71-24729 *	#
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NASA-CASE-MFS-25287-1	c 44	N82-18686 *	#	NASA-CASE-MSC-11242	c 35	N78-17358 *	#	NASA-CASE-MSC-13335-1	c 06	N72-31140 *	#
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NASA-CASE-MFS-25312-1	c 74	N83-17305 *	#	NASA-CASE-MSC-11817-1	c 15	N71-26611 *	#	NASA-CASE-MSC-13492-1	c 10	N71-28860 *	#
NASA-CASE-MFS-25315-1	c 36	N83-29680 *	#	NASA-CASE-MSC-11847-1	c 14	N72-11363 *	#	NASA-CASE-MSC-13512-1	c 15	N72-22485 *	#
NASA-CASE-MFS-25319-1	c 60	N85-33701 *	#	NASA-CASE-MSC-11849-1	c 15	N72-22448 *	#	NASA-CASE-MSC-13530-2	c 23	N75-14834 *	#
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NASA-CASE-MFS-25426-1	c 25	N83-10126 *	#	NASA-CASE-MSC-12086-1	c 05	N71-12345 *	#	NASA-CASE-MSC-13609-1	c 05	N72-25122 *	#
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NASA-CASE-MFS-25430-1	c 33	N84-16453 *	#	NASA-CASE-MSC-12105-1	c 14	N72-21409 *	#	NASA-CASE-MSC-13746-1	c 10	N73-32143 *	#
NASA-CASE-MFS-25436-1	c 27	N83-36220 *	#	NASA-CASE-MSC-12109	c 18	N71-26285 *	#	NASA-CASE-MSC-13789-1	c 11	N73-32152 *	#
NASA-CASE-MFS-25477-1	c 33	N84-14424 *	#	NASA-CASE-MSC-12111-1	c 02	N71-11039 *	#	NASA-CASE-MSC-13802-2	c 35	N76-15431 *	#
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NASA-CASE-MFS-25607-1	c 33	N83-34190 *	#	NASA-CASE-MSC-12146-1	c 07	N72-17109 *	#	NASA-CASE-MSC-13972-1	c 52	N74-10975 *	#
NASA-CASE-MFS-25616-1	c 33	N84-16455 *	#	NASA-CASE-MSC-12165-1	c 07	N71-33696 *	#	NASA-CASE-MSC-13999-1	c 52	N74-26626 *	#
NASA-CASE-MFS-25631-1	c 34	N84-12406 *	#	NASA-CASE-MSC-12168-1	c 09	N71-18600 *	#	NASA-CASE-MSC-14053-1	c 60	N74-12888 *	#
NASA-CASE-MFS-25637-1	c 44	N85-21769 *	#	NASA-CASE-MSC-12178-1	c 09	N71-13518 *	#	NASA-CASE-MSC-14065-1	c 32	N74-26654 *	#
NASA-CASE-MFS-25641-1	c 72	N84-28575 *	#	NASA-CASE-MSC-12205-1	c 07	N71-27056 *	#	NASA-CASE-MSC-14066-1	c 33	N74-27705 *	#
NASA-CASE-MFS-25670-1	c 33	N84-22884 *	#	NASA-CASE-MSC-12206-1	c 05	N71-17599 *	#	NASA-CASE-MSC-14070-1	c 32	N74-32598 *	#
NASA-CASE-MFS-25678-1	c 37	N84-11497 *	#	NASA-CASE-MSC-12209	c 09	N71-24842 *	#	NASA-CASE-MSC-14081-1			

NASA-CASE-MSC-14180-1	c 52	N76-14757 *	#	NASA-CASE-MSC-18674-1	c 74	N81-24907 *	#	NASA-CASE-NPO-10141	c 11	N71-24964 *
NASA-CASE-MSC-14182-1	c 27	N76-14264 *	#	NASA-CASE-MSC-18675-1	c 32	N84-22820 *	#	NASA-CASE-NPO-10143	c 10	N71-26326 *
NASA-CASE-MSC-14187-1	c 35	N74-32879 *	#	NASA-CASE-MSC-18723-1	c 35	N83-21312 *	#	NASA-CASE-NPO-10144	c 14	N71-17701 *
NASA-CASE-MSC-14219-1	c 32	N74-27612 *	#	NASA-CASE-MSC-18736-1	c 24	N83-13172 *	#	NASA-CASE-NPO-10150	c 08	N71-24650 *
NASA-CASE-MSC-14240-1	c 33	N75-14957 *	#	NASA-CASE-MSC-18737-1	c 24	N83-13171 *	#	NASA-CASE-NPO-10151	c 37	N78-17386 *
NASA-CASE-MSC-14245-1	c 18	N75-27041 *	#	NASA-CASE-MSC-18741-1	c 27	N82-29456 *	#	NASA-CASE-NPO-10158	c 33	N71-16356 *
NASA-CASE-MSC-14270-1	c 27	N76-22377 *	#	NASA-CASE-MSC-18742-1	c 37	N82-26673 *	#	NASA-CASE-NPO-10166-1	c 07	N73-22076 *
NASA-CASE-MSC-14270-2	c 27	N76-23426 *	#	NASA-CASE-MSC-18759-1	c 52	N83-27578 *	#	NASA-CASE-NPO-10166-2	c 35	N76-16391 *
NASA-CASE-MSC-14273-1	c 34	N75-33342 *	#	NASA-CASE-MSC-18761-1	c 52	N83-27577 *	#	NASA-CASE-NPO-10169	c 10	N71-24844 *
NASA-CASE-MSC-14276-1	c 52	N77-14737 *	#	NASA-CASE-MSC-18791-1	c 37	N83-36482 *	#	NASA-CASE-NPO-10173	c 15	N71-24696 *
NASA-CASE-MSC-14331-1	c 27	N76-24405 *	#	NASA-CASE-MSC-18794-1	c 44	N83-14693 *	#	NASA-CASE-NPO-10174	c 14	N71-18465 *
NASA-CASE-MSC-14331-2	c 27	N78-17213 *	#	NASA-CASE-MSC-18796-1	c 24	N82-26389 *	#	NASA-CASE-NPO-10175	c 14	N71-18625 *
NASA-CASE-MSC-14331-3	c 27	N78-32262 *	#	NASA-CASE-MSC-18807-1	c 37	N83-36483 *	#	NASA-CASE-NPO-10185	c 10	N71-26339 *
NASA-CASE-MSC-14339-1	c 05	N75-24716 *	#	NASA-CASE-MSC-18832-1	c 27	N83-18908 *	#	NASA-CASE-NPO-10188	c 03	N71-20273 *
NASA-CASE-MSC-14428-1	c 23	N77-17161 *	#	NASA-CASE-MSC-18851-1	c 27	N82-26460 *	#	NASA-CASE-NPO-10189-1	c 33	N77-21314 *
NASA-CASE-MSC-14435-1	c 37	N76-18455 *	#	NASA-CASE-MSC-18866-1	c 37	N85-29283 *	#	NASA-CASE-NPO-10194	c 03	N71-20407 *
NASA-CASE-MSC-14472-1	c 43	N77-10584 *	#	NASA-CASE-MSC-18929-1	c 39	N85-29213 *	#	NASA-CASE-NPO-10198	c 09	N71-24806 *
NASA-CASE-MSC-14557-1	c 32	N76-16249 *	#	NASA-CASE-MSC-18934-3	c 39	N83-20280 *	#	NASA-CASE-NPO-10199	c 09	N72-17156 *
NASA-CASE-MSC-14558-1	c 32	N75-21486 *	#	NASA-CASE-MSC-18936-1	c 24	N82-26387 *	#	NASA-CASE-NPO-10201	c 08	N71-18694 *
NASA-CASE-MSC-14623-1	c 52	N77-28717 *	#	NASA-CASE-MSC-18969-1	c 35	N83-29652 *	#	NASA-CASE-NPO-10214	c 10	N71-26577 *
NASA-CASE-MSC-14632-1	c 54	N78-14784 *	#	NASA-CASE-MSC-19095-1	c 18	N84-22605 *	#	NASA-CASE-NPO-10230	c 09	N71-12520 *
NASA-CASE-MSC-14640-1	c 54	N76-14804 *	#	NASA-CASE-MSC-19372-1	c 37	N75-19683 *	#	NASA-CASE-NPO-10231	c 07	N71-26101 *
NASA-CASE-MSC-14649-1	c 33	N76-16331 *	#	NASA-CASE-MSC-19442-1	c 39	N76-31562 *	#	NASA-CASE-NPO-10233-1	c 07	N78-33913 *
NASA-CASE-MSC-14653-1	c 35	N77-19385 *	#	NASA-CASE-MSC-19514-1	c 74	N77-10899 *	#	NASA-CASE-NPO-10234	c 06	N72-17094 *
NASA-CASE-MSC-14683-1	c 74	N77-18893 *	#	NASA-CASE-MSC-19535-1	c 37	N79-20377 *	#	NASA-CASE-NPO-10242	c 09	N71-24803 *
NASA-CASE-MSC-14733-1	c 54	N76-24900 *	#	NASA-CASE-MSC-19536-1	c 37	N77-32499 *	#	NASA-CASE-NPO-10244	c 15	N72-26371 *
NASA-CASE-MSC-14735-1	c 54	N76-24900 *	#	NASA-CASE-MSC-19568-1	c 37	N77-22482 *	#	NASA-CASE-NPO-10250	c 23	N71-16212 *
NASA-CASE-MSC-14757-1	c 35	N78-10428 *	#	NASA-CASE-MSC-19666-1	c 34	N78-25350 *	#	NASA-CASE-NPO-10251	c 10	N71-27365 *
NASA-CASE-MSC-14771-1	c 54	N77-32722 *	#	NASA-CASE-MSC-19672-1	c 37	N78-17383 *	#	NASA-CASE-NPO-10271	c 17	N71-16393 *
NASA-CASE-MSC-14773-1	c 35	N78-12390 *	#	NASA-CASE-MSC-19693-1	c 38	N79-14398 *	#	NASA-CASE-NPO-10298	c 12	N71-17661 *
NASA-CASE-MSC-14805-1	c 54	N78-32720 *	#	NASA-CASE-MSC-19706-1	c 26	N78-24333 *	#	NASA-CASE-NPO-10300	c 14	N71-17662 *
NASA-CASE-MSC-14831-1	c 25	N78-10225 *	#	NASA-CASE-MSC-20036-1	c 09	N78-31129 *	#	NASA-CASE-NPO-10301	c 07	N72-11448 *
NASA-CASE-MSC-14836-1	c 52	N82-11770 *	#	NASA-CASE-MSC-20080-1	c 76	N85-33826 *	#	NASA-CASE-NPO-10302	c 10	N71-26142 *
NASA-CASE-MSC-14840-1	c 32	N77-24331 *	#	NASA-CASE-MSC-20112-1	c 37	N85-30334 *	#	NASA-CASE-NPO-10303	c 07	N72-22127 *
NASA-CASE-MSC-14903-1	c 27	N78-32256 *	#	NASA-CASE-MSC-20127-2	c 37	N85-20338 *	#	NASA-CASE-NPO-10309	c 15	N69-23909 *
NASA-CASE-MSC-14903-2	c 27	N80-10358 *	#	NASA-CASE-MSC-20148-1	c 37	N85-34403 *	#	NASA-CASE-NPO-10311	c 31	N71-15643 *
NASA-CASE-MSC-14903-3	c 27	N80-24438 *	#	NASA-CASE-MSC-20162-1	c 37	N85-29284 *	#	NASA-CASE-NPO-10316-1	c 37	N77-22479 *
NASA-CASE-MSC-14905-1	c 37	N77-28487 *	#	NASA-CASE-MSC-20181-1	c 37	N86-20803 *	#	NASA-CASE-NPO-10320	c 14	N71-17655 *
NASA-CASE-MSC-14916-1	c 33	N78-10375 *	#	NASA-CASE-MSC-20187-1	c 33	N82-28549 *	#	NASA-CASE-NPO-10331	c 09	N71-26701 *
NASA-CASE-MSC-14939-1	c 32	N79-11264 *	#	NASA-CASE-MSC-20202-1	c 33	N85-20249 *	#	NASA-CASE-NPO-10337	c 14	N71-15604 *
NASA-CASE-MSC-15158-1	c 14	N72-17325 *	#	NASA-CASE-MSC-20206-1	c 54	N84-16803 *	#	NASA-CASE-NPO-10342	c 10	N71-33407 *
NASA-CASE-MSC-15474-1	c 15	N71-26162 *	#	NASA-CASE-MSC-20250-1	c 25	N86-27431 *	#	NASA-CASE-NPO-10343	c 07	N71-27341 *
NASA-CASE-MSC-15567-1	c 33	N73-16918 *	#	NASA-CASE-MSC-20254-1	c 35	N86-19581 *	#	NASA-CASE-NPO-10344	c 10	N71-26544 *
NASA-CASE-MSC-15626-1	c 14	N72-25411 *	#	NASA-CASE-MSC-20258-1	c 16	N84-22601 *	#	NASA-CASE-NPO-10348	c 10	N71-12554 *
NASA-CASE-MSC-16000-1	c 37	N78-24544 *	#	NASA-CASE-MSC-20261-1	c 60	N84-28492 *	#	NASA-CASE-NPO-10351	c 08	N71-12503 *
NASA-CASE-MSC-16043-1	c 37	N79-11402 *	#	NASA-CASE-MSC-20261-2	c 54	N84-28484 *	#	NASA-CASE-NPO-10373	c 03	N71-18698 *
NASA-CASE-MSC-16074-1	c 27	N80-26446 *	#	NASA-CASE-MSC-20275-1	c 54	N84-23113 *	#	NASA-CASE-NPO-10388	c 07	N71-24622 *
NASA-CASE-MSC-16098-1	c 51	N79-10693 *	#	NASA-CASE-MSC-20304-1	c 35	N85-21595 *	#	NASA-CASE-NPO-10401	c 03	N72-20033 *
NASA-CASE-MSC-16170-2	c 32	N84-27952 *	#	NASA-CASE-MSC-20319-1	c 37	N82-31690 *	#	NASA-CASE-NPO-10404	c 03	N71-12255 *
NASA-CASE-MSC-16182-1	c 54	N80-10799 *	#	NASA-CASE-MSC-20418-1	c 37	N85-21649 *	#	NASA-CASE-NPO-10412	c 09	N71-28421 *
NASA-CASE-MSC-16217-1	c 31	N81-27323 *	#	NASA-CASE-MSC-20475-1	c 74	N86-20126 *	#	NASA-CASE-NPO-10416	c 12	N71-27332 *
NASA-CASE-MSC-16239-1	c 37	N81-32510 *	#	NASA-CASE-MSC-20497-1	c 37	N85-29290 *	#	NASA-CASE-NPO-10417	c 16	N71-33410 *
NASA-CASE-MSC-16253-1	c 32	N79-20297 *	#	NASA-CASE-MSC-20543-1	c 34	N85-29180 *	#	NASA-CASE-NPO-10424-1	c 27	N81-24558 *
NASA-CASE-MSC-16258-1	c 45	N79-12584 *	#	NASA-CASE-MSC-20549-1	c 18	N84-22610 *	#	NASA-CASE-NPO-10431	c 15	N71-29132 *
NASA-CASE-MSC-16260-1	c 51	N80-16714 *	#	NASA-CASE-MSC-20622-1	c 37	N86-19612 *	#	NASA-CASE-NPO-10440	c 15	N72-21466 *
NASA-CASE-MSC-16270-1	c 37	N78-27423 *	#	NASA-CASE-MSC-20635-1	c 25	N86-19413 *	#	NASA-CASE-NPO-10447	c 06	N70-11252 *
NASA-CASE-MSC-16370-1	c 35	N81-19427 *	#	NASA-CASE-MSC-20653-1	c 18	N84-34244 *	#	NASA-CASE-NPO-10467	c 23	N71-26654 *
NASA-CASE-MSC-16394-1	c 28	N81-24280 *	#	NASA-CASE-MSC-20676-1	c 35	N86-26595 *	#	NASA-CASE-NPO-10468	c 23	N71-33229 *
NASA-CASE-MSC-16433-1	c 52	N78-27750 *	#	NASA-CASE-MSC-20783-1	c 18	N86-24729 *	#	NASA-CASE-NPO-10539	c 07	N71-11285 *
NASA-CASE-MSC-16433-3	c 52	N81-24711 *	#	NASA-CASE-MSC-20797-1	c 35	N86-20756 *	#	NASA-CASE-NPO-10542	c 09	N72-27228 *
NASA-CASE-MSC-16461-1	c 33	N79-11313 *	#	NASA-CASE-MSC-20812-1	c 37	N86-20806 *	#	NASA-CASE-NPO-10548	c 16	N71-24831 *
NASA-CASE-MSC-16462-1	c 32	N82-31583 *	#	NASA-CASE-MSC-20821-1	c 34	N86-27593 *	#	NASA-CASE-NPO-10556	c 14	N71-27185 *
NASA-CASE-MSC-16497-1	c 25	N82-12166 *	#	NASA-CASE-MSC-20841-1	c 17	N86-20466 *	#	NASA-CASE-NPO-10557	c 27	N78-17214 *
NASA-CASE-MSC-16697-1	c 33	N79-28415 *	#	NASA-CASE-MSC-20857-1	c 34	N86-20721 *	#	NASA-CASE-NPO-10560	c 08	N72-22166 *
NASA-CASE-MSC-16747-1	c 33	N81-17349 *	#	NASA-CASE-MSC-20870-1	c 37	N86-20807 *	#	NASA-CASE-NPO-10567	c 08	N71-24633 *
NASA-CASE-MSC-16777-1	c 51	N80-27067 *	#	NASA-CASE-MSC-20906-1	c 36	N86-24977 *	#	NASA-CASE-NPO-10575	c 03	N72-25019 *
NASA-CASE-MSC-16800-1	c 32	N81-14187 *	#	NASA-CASE-MSC-20910-1	c 18	N86-19344 *	#	NASA-CASE-NPO-10591	c 03	N72-22041 *
NASA-CASE-MSC-16841-1	c 34	N79-24285 *	#	NASA-CASE-MSC-20912-1	c 37	N86-19613 *	#	NASA-CASE-NPO-10595	c 10	N71-25917 *
NASA-CASE-MSC-16934-3	c 24	N84-16262 *	#	NASA-CASE-MSC-20921-1	c 32	N86-24879 *	#	NASA-CASE-NPO-10596	c 06	N71-25929 *
NASA-CASE-MSC-16938-1	c 37	N80-23653 *	#	NASA-CASE-MSC-20946-1	c 18	N86-20471 *	#	NASA-CASE-NPO-10606	c 15	N72-25451 *
NASA-CASE-MSC-16973-1	c 37	N81-14317 *	#	NASA-CASE-MSC-20979-1	c 34	N86-32661 *	#	NASA-CASE-NPO-10607	c 09	N71-27232 *
NASA-CASE-MSC-17832-1	c 33	N74-14956 *	#	NASA-CASE-MSC-25707-1	c 37	N86-19614 *	#	NASA-CASE-NPO-10617-1	c 35	N74-22095 *
NASA-CASE-MSC-18035-1	c 32	N81-15179 *	#	NASA-CASE-MSC-90153-2	c 35	N85-29214 *	#	NASA-CASE-NPO-10619-1	c 35	N77-21393 *
NASA-CASE-MSC-18106-1	c 33	N82-11357 *	#		c 05	N72-25120 *	#	NASA-CASE-NPO-10625	c 09	N71-26182 *
NASA-CASE-MSC-18107-1	c 27	N81-25209 *	#	NASA-CASE-NFS-25754-1	c 35	N84-28018 *	#	NASA-CASE-NPO-10629	c 08	N72-18184 *
NASA-CASE-MSC-18134-1	c 37	N81-15363 *	#					NASA-CASE-NPO-10633	c 03	N72-28025 *
NASA-CASE-MSC-18172-1	c 26	N80-19237 *	#	NASA-CASE-NPO-08835-1	c 27	N78-33228 *	#	NASA-CASE-NPO-10634	c 23	N72-25619 *
NASA-CASE-MSC-18179-1	c 20	N80-18097 *	#	NASA-CASE-NPO-10003	c 10	N71-26415 *	#	NASA-CASE-NPO-10636	c 08	N72-25210 *
NASA-CASE-MSC-18223-1	c 24	N82-29362 *	#	NASA-CASE-NPO-10034	c 15	N71-17685 *	#	NASA-CASE-NPO-10637	c 15	N72-12409 *
NASA-CASE-MSC-18223-2	c 54	N84-11758 *	#	NASA-CASE-NPO-10037	c 09	N71-19610 *	#	NASA-CASE-NPO-10646	c 15	N71-28467 *
NASA-CASE-MSC-18255-1	c 74	N80-33210 *	#	NASA-CASE-NPO-10046	c 28	N72-17843 *	#	NASA-CASE-NPO-10649	c 07	N71-24840 *
NASA-CASE-MSC-18334-1	c 32	N80-32604 *	#	NASA-CASE-NPO-10051	c 18	N71-24934 *	#	NASA-CASE-NPO-10671	c 15	N72-20443 *
NASA-CASE-MSC-18381-1	c 52	N81-28740 *	#	NASA-CASE-NPO-10064	c 15	N71-17693 *	#	NASA-CASE-NPO-10677	c 05	N72-11084 *
NASA-CASE-MSC-18382-1	c 27	N82-16238 *	#	NASA-CASE-NPO-10066	c 09	N71-18598 *	#	NASA-CASE-NPO-10679	c 15	N72-21462 *
NASA-CASE-MSC-18382-2	c 27	N84-14324 *	#	NASA-CASE-NPO-10068	c 15	N71-17928 *	#	NASA-CASE-NPO-10680	c 31	N73-14855 *
NASA-CASE-MSC-18407-1	c 33	N82-24427 *	#	NASA-CASE-NPO-10070	c 08	N71-19288 *	#	NASA-CASE-NPO-10682	c 15	N70-34699 *
NASA-CASE-MSC-18417-1	c 74	N85-29750 *	#	NASA-CASE-NPO-10096	c 15	N71-27372 *	#	NASA-CASE-NPO-10691	c 14	N71-26199 *
NASA-CASE-MSC-18422-1	c 37	N82-16408 *	#	NASA-CASE-NPO-10109	c 07	N71-24583 *	#	NASA-CASE-NPO-10694	c 09	N72-20200 *
NASA-CASE-MSC-18430-1	c 37	N82-24491 *	#	NASA-CASE-NPO-10112	c 03	N71-11049 *	#	NASA-CASE-NPO-10700	c 07	N71-33613 *
NASA-CASE-MSC-18498-1	c 60	N82-29013 *	#	NASA-CASE-NPO-10117	c 08	N71-12502 *	#	NASA-CASE-NPO-10701	c 06	N71-28620 *
NASA-CASE-MSC-18526-1	c 37	N82-24494 *	#	NASA-CASE-NPO-10118	c 15	N71-15608 *	#	NASA-CASE-NPO-10704	c 15	N72-20445 *
NASA-CASE-MSC-18532-1	c 32	N82-27558 *	#	NASA-CASE-NPO-10122	c 07	N71-24741 *	#	NASA-CASE-NPO-10711-1	c 35	N77-21392 *
NASA-CASE-MSC-18538-1	c 37	N82-26672 *	#	NASA-CASE-NPO-10123	c 12	N71-17631 *	#	NASA-CASE-NPO-10714	c 06	N69-31244 *
NASA-CASE-MSC-18578-1	c 32	N85-21427 *	#	NASA-CASE-NPO-10138	c 15	N71-24835 *	#	NASA-CASE-NPO-10716	c 09	N71-24892 *
NASA-CASE-MSC-18606-1	c 3									



NASA-CASE-NPO-10737	c 28	N72-11709 *	NASA-CASE-NPO-11302-1	c 07	N73-13149 *	NASA-CASE-NPO-12109	c 11	N72-22245 *
NASA-CASE-NPO-10743	c 08	N72-21199 *	NASA-CASE-NPO-11302-2	c 32	N74-10132 *	NASA-CASE-NPO-12119-1	c 52	N75-15270 *
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NASA-CASE-NPO-10748	c 08	N72-20177 *	NASA-CASE-NPO-11311	c 14	N72-25414 *	NASA-CASE-NPO-12128-1	c 14	N73-32317 *
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NASA-CASE-NPO-10755	c 15	N71-27084 *	NASA-CASE-NPO-11322	c 06	N72-25146 *	NASA-CASE-NPO-12131-3	c 37	N80-18400 *
NASA-CASE-NPO-10758	c 14	N73-14427 *	NASA-CASE-NPO-11330	c 33	N73-26958 *	NASA-CASE-NPO-12134-1	c 33	N76-31409 *
NASA-CASE-NPO-10760	c 09	N72-25254 *	NASA-CASE-NPO-11333	c 08	N72-22162 *	NASA-CASE-NPO-12142-1	c 38	N76-28563 *
NASA-CASE-NPO-10764-1	c 14	N73-14428 *	NASA-CASE-NPO-11336-1	c 76	N79-18678 *	NASA-CASE-NPO-12148-1	c 44	N78-27515 *
NASA-CASE-NPO-10764-2	c 35	N75-25122 *	NASA-CASE-NPO-11337-1	c 74	N81-19896 *	NASA-CASE-NPO-13044-1	c 35	N74-15094 *
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NASA-CASE-NPO-10767-1	c 06	N73-33076 *	NASA-CASE-NPO-11340	c 15	N72-33477 *	NASA-CASE-NPO-13058-1	c 37	N77-22480 *
NASA-CASE-NPO-10767-2	c 06	N72-27151 *	NASA-CASE-NPO-11342	c 09	N72-25248 *	NASA-CASE-NPO-13059-1	c 37	N76-20480 *
NASA-CASE-NPO-10768-2	c 06	N72-27144 *	NASA-CASE-NPO-11358	c 07	N72-25172 *	NASA-CASE-NPO-13063-1	c 25	N76-18245 *
NASA-CASE-NPO-10768	c 06	N71-27254 *	NASA-CASE-NPO-11361	c 07	N72-32169 *	NASA-CASE-NPO-13064-1	c 33	N79-11314 *
NASA-CASE-NPO-10769	c 08	N72-11171 *	NASA-CASE-NPO-11366	c 11	N73-26238 *	NASA-CASE-NPO-13065-1	c 52	N74-26825 *
NASA-CASE-NPO-10774	c 06	N72-17095 *	NASA-CASE-NPO-11369	c 15	N73-13467 *	NASA-CASE-NPO-13067-1	c 60	N76-18800 *
NASA-CASE-NPO-10778	c 14	N72-11364 *	NASA-CASE-NPO-11371	c 08	N73-12177 *	NASA-CASE-NPO-13081-1	c 33	N74-22814 *
NASA-CASE-NPO-10781-1	c 33	N77-21314 *	NASA-CASE-NPO-11373	c 13	N72-25323 *	NASA-CASE-NPO-13086-1	c 15	N73-12495 *
NASA-CASE-NPO-10790-1	c 33	N77-21316 *	NASA-CASE-NPO-11377	c 15	N73-27406 *	NASA-CASE-NPO-13087-2	c 44	N76-31666 *
NASA-CASE-NPO-10796	c 15	N71-27068 *	NASA-CASE-NPO-11387	c 14	N73-14429 *	NASA-CASE-NPO-13091-1	c 09	N73-12214 *
NASA-CASE-NPO-10808	c 15	N71-27432 *	NASA-CASE-NPO-11388	c 03	N72-23048 *	NASA-CASE-NPO-13096-1	c 37	N77-22480 *
NASA-CASE-NPO-10810	c 14	N71-27323 *	NASA-CASE-NPO-11403-1	c 33	N77-22386 *	NASA-CASE-NPO-13103-1	c 32	N74-20811 *
NASA-CASE-NPO-10812	c 15	N73-13464 *	NASA-CASE-NPO-11406	c 08	N73-12175 *	NASA-CASE-NPO-13105-1	c 37	N74-21060 *
NASA-CASE-NPO-10817-1	c 08	N73-30135 *	NASA-CASE-NPO-11417	c 15	N73-24513 *	NASA-CASE-NPO-13112-1	c 73	N74-26767 *
NASA-CASE-NPO-10821	c 03	N71-19545 *	NASA-CASE-NPO-11418-1	c 14	N73-13420 *	NASA-CASE-NPO-13114-2	c 73	N78-28913 *
NASA-CASE-NPO-10828	c 33	N72-17948 *	NASA-CASE-NPO-11426	c 07	N73-26119 *	NASA-CASE-NPO-13120-1	c 27	N76-15311 *
NASA-CASE-NPO-10830-1	c 27	N81-15104 *	NASA-CASE-NPO-11429-1	c 74	N77-21941 *	NASA-CASE-NPO-13121-1	c 73	N77-18891 *
NASA-CASE-NPO-10831	c 33	N72-20915 *	NASA-CASE-NPO-11432-2	c 35	N74-15090 *	NASA-CASE-NPO-13125-1	c 33	N75-19519 *
NASA-CASE-NPO-10832	c 14	N72-21405 *	NASA-CASE-NPO-11437	c 16	N72-28521 *	NASA-CASE-NPO-13127-1	c 35	N74-23040 *
NASA-CASE-NPO-10844	c 07	N72-20140 *	NASA-CASE-NPO-11456	c 08	N73-26176 *	NASA-CASE-NPO-13131-1	c 36	N75-19652 *
NASA-CASE-NPO-10851	c 07	N71-24613 *	NASA-CASE-NPO-11458A	c 20	N78-32179 *	NASA-CASE-NPO-13137-1	c 27	N80-32514 *
NASA-CASE-NPO-10857-1	c 33	N80-14330 *	NASA-CASE-NPO-11458	c 28	N72-23810 *	NASA-CASE-NPO-13138-1	c 33	N74-17927 *
NASA-CASE-NPO-10862	c 06	N72-22107 *	NASA-CASE-NPO-11479	c 15	N73-13462 *	NASA-CASE-NPO-13139-1	c 60	N76-21914 *
NASA-CASE-NPO-10863-2	c 06	N72-25152 *	NASA-CASE-NPO-11481	c 21	N73-13644 *	NASA-CASE-NPO-13140-1	c 32	N75-24982 *
NASA-CASE-NPO-10863	c 06	N70-11251 *	NASA-CASE-NPO-11493	c 14	N73-12447 *	NASA-CASE-NPO-13147-1	c 36	N77-25502 *
NASA-CASE-NPO-10866-1	c 28	N79-14228 *	NASA-CASE-NPO-11497	c 08	N73-25206 *	NASA-CASE-NPO-13157-1	c 37	N74-32918 *
NASA-CASE-NPO-10870-1	c 33	N77-22386 *	NASA-CASE-NPO-11510-1	c 33	N77-21315 *	NASA-CASE-NPO-13159-1	c 33	N74-17928 *
NASA-CASE-NPO-10872-1	c 35	N79-16246 *	NASA-CASE-NPO-11515-1	c 33	N77-13315 *	NASA-CASE-NPO-13160-1	c 35	N74-18090 *
NASA-CASE-NPO-10883	c 31	N72-22874 *	NASA-CASE-NPO-11548	c 07	N73-26118 *	NASA-CASE-NPO-13170-1	c 35	N76-14430 *
NASA-CASE-NPO-10890	c 11	N73-12265 *	NASA-CASE-NPO-11556	c 12	N72-25292 *	NASA-CASE-NPO-13171-1	c 32	N74-11000 *
NASA-CASE-NPO-10893	c 27	N73-22710 *	NASA-CASE-NPO-11559	c 28	N73-24784 *	NASA-CASE-NPO-13175-1	c 36	N75-31427 *
NASA-CASE-NPO-10895	c 14	N73-20478 *	NASA-CASE-NPO-11569	c 10	N73-26299 *	NASA-CASE-NPO-13201-1	c 37	N75-15050 *
NASA-CASE-NPO-10998-1	c 06	N73-32029 *	NASA-CASE-NPO-11572	c 07	N73-16121 *	NASA-CASE-NPO-13205-1	c 31	N74-32917 *
NASA-CASE-NPO-10999-1	c 06	N73-32029 *	NASA-CASE-NPO-11575-1	c 74	N81-19896 *	NASA-CASE-NPO-13214-1	c 35	N75-25123 *
NASA-CASE-NPO-11001	c 07	N72-21118 *	NASA-CASE-NPO-11593-1	c 07	N72-28012 *	NASA-CASE-NPO-13215-1	c 35	N75-25123 *
NASA-CASE-NPO-11002	c 14	N72-22441 *	NASA-CASE-NPO-11609-2	c 27	N77-31308 *	NASA-CASE-NPO-13217-1	c 32	N75-26194 *
NASA-CASE-NPO-11012	c 15	N72-11391 *	NASA-CASE-NPO-11623-1	c 71	N74-31148 *	NASA-CASE-NPO-13231-1	c 45	N75-27585 *
NASA-CASE-NPO-11013	c 11	N72-22247 *	NASA-CASE-NPO-11628-1	c 07	N73-30113 *	NASA-CASE-NPO-13237-1	c 44	N76-18641 *
NASA-CASE-NPO-11016	c 08	N72-31226 *	NASA-CASE-NPO-11630	c 08	N72-33172 *	NASA-CASE-NPO-13247-1	c 76	N79-18678 *
NASA-CASE-NPO-11018	c 08	N72-21200 *	NASA-CASE-NPO-11631	c 10	N73-12244 *	NASA-CASE-NPO-13253-1	c 37	N75-18573 *
NASA-CASE-NPO-11021	c 03	N72-20032 *	NASA-CASE-NPO-11659-1	c 35	N74-11283 *	NASA-CASE-NPO-13263-1	c 12	N75-24774 *
NASA-CASE-NPO-11023	c 09	N72-17155 *	NASA-CASE-NPO-11661	c 07	N73-14130 *	NASA-CASE-NPO-13274-1	c 25	N79-10163 *
NASA-CASE-NPO-11031	c 07	N71-33606 *	NASA-CASE-NPO-11682-1	c 35	N74-15127 *	NASA-CASE-NPO-13281-1	c 37	N75-13266 *
NASA-CASE-NPO-11036	c 15	N72-24522 *	NASA-CASE-NPO-11686	c 14	N73-25462 *	NASA-CASE-NPO-13282	c 38	N78-17396 *
NASA-CASE-NPO-11059	c 15	N72-17454 *	NASA-CASE-NPO-11703-1	c 10	N73-32144 *	NASA-CASE-NPO-13283	c 38	N78-17395 *
NASA-CASE-NPO-11064	c 07	N72-11150 *	NASA-CASE-NPO-11707	c 07	N73-25161 *	NASA-CASE-NPO-13292-1	c 32	N75-15854 *
NASA-CASE-NPO-11078	c 09	N72-25262 *	NASA-CASE-NPO-11738-1	c 09	N73-30185 *	NASA-CASE-NPO-13303-1	c 20	N75-24837 *
NASA-CASE-NPO-11082	c 08	N72-22167 *	NASA-CASE-NPO-11743-1	c 28	N74-27425 *	NASA-CASE-NPO-13308-1	c 36	N75-30524 *
NASA-CASE-NPO-11087	c 23	N71-29125 *	NASA-CASE-NPO-11749	c 14	N73-28486 *	NASA-CASE-NPO-13309-1	c 25	N81-19244 *
NASA-CASE-NPO-11088	c 08	N71-29034 *	NASA-CASE-NPO-11751	c 07	N73-24176 *	NASA-CASE-NPO-13313-1	c 54	N75-27761 *
NASA-CASE-NPO-11091	c 18	N72-22567 *	NASA-CASE-NPO-11758-1	c 31	N74-23065 *	NASA-CASE-NPO-13321-1	c 32	N75-26195 *
NASA-CASE-NPO-11095	c 15	N72-25455 *	NASA-CASE-NPO-11771	c 03	N73-20040 *	NASA-CASE-NPO-13327-1	c 35	N75-23910 *
NASA-CASE-NPO-11103-1	c 35	N77-27367 *	NASA-CASE-NPO-11775	c 26	N72-28761 *	NASA-CASE-NPO-13342-1	c 37	N76-16446 *
NASA-CASE-NPO-11104	c 08	N72-22165 *	NASA-CASE-NPO-11806-1	c 44	N74-19693 *	NASA-CASE-NPO-13342-2	c 44	N76-29700 *
NASA-CASE-NPO-11106	c 14	N70-34697 *	NASA-CASE-NPO-11820-1	c 32	N74-19788 *	NASA-CASE-NPO-13345-1	c 37	N75-19684 *
NASA-CASE-NPO-11118	c 03	N72-25021 *	NASA-CASE-NPO-11821-1	c 08	N73-26175 *	NASA-CASE-NPO-13346-1	c 36	N76-29575 *
NASA-CASE-NPO-11120-1	c 34	N74-18552 *	NASA-CASE-NPO-11850-1	c 32	N74-12912 *	NASA-CASE-NPO-13348-1	c 33	N75-31332 *
NASA-CASE-NPO-11129	c 09	N72-33204 *	NASA-CASE-NPO-11856-1	c 36	N74-15145 *	NASA-CASE-NPO-13360-1	c 37	N75-25185 *
NASA-CASE-NPO-11130	c 08	N72-20176 *	NASA-CASE-NPO-11861-1	c 36	N74-20009 *	NASA-CASE-NPO-13374-1	c 33	N75-19524 *
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NASA-CASE-NPO-11134	c 09	N72-21246 *	NASA-CASE-NPO-11880	c 28	N73-24783 *	NASA-CASE-NPO-13386-1	c 54	N75-27758 *
NASA-CASE-NPO-11138	c 03	N70-34646 *	NASA-CASE-NPO-11905-1	c 33	N74-12887 *	NASA-CASE-NPO-13388-1	c 35	N76-16390 *
NASA-CASE-NPO-11140	c 15	N72-17455 *	NASA-CASE-NPO-11919-1	c 35	N74-11284 *	NASA-CASE-NPO-13391-1	c 34	N76-27515 *
NASA-CASE-NPO-11147	c 14	N72-27408 *	NASA-CASE-NPO-11921-1	c 32	N74-30523 *	NASA-CASE-NPO-13396-1	c 35	N76-18401 *
NASA-CASE-NPO-11150	c 35	N78-17359 *	NASA-CASE-NPO-11932-1	c 35	N74-23040 *	NASA-CASE-NPO-13402-1	c 37	N76-18457 *
NASA-CASE-NPO-11156-2	c 33	N75-31331 *	NASA-CASE-NPO-11941-1	c 10	N73-27171 *	NASA-CASE-NPO-13422-1	c 60	N76-14818 *
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NASA-CASE-NPO-11177	c 15	N72-17453 *	NASA-CASE-NPO-11945-1	c 36	N76-18427 *	NASA-CASE-NPO-13426-1	c 33	N75-31330 *
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NASA-CASE-NPO-11201	c 14	N72-27409 *	NASA-CASE-NPO-11961-1	c 44	N76-18643 *	NASA-CASE-NPO-13443-1	c 76	N76-20994 *
NASA-CASE-NPO-11202	c 15	N72-25450 *	NASA-CASE-NPO-11962-1	c 33	N74-10194 *	NASA-CASE-NPO-13447-1	c 60	N77-12721 *
NASA-CASE-NPO-11203	c 10	N72-20224 *	NASA-CASE-NPO-11966-1	c 33	N74-19288 *	NASA-CASE-NPO-13449-1	c 36	N75-32441 *
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NASA-CASE-NPO-11222	c 15	N72-25456 *	NASA-CASE-NPO-12000	c 27	N72-25699 *	NASA-CASE-NPO-13462-1	c 35	N76-24524 *
NASA-CASE-NPO-11239	c 14	N73-12446 *	NASA-CASE-NPO-12015	c 27	N73-16764 *	NASA-CASE-NPO-13464-1	c 44	N76-18642 *
NASA-CASE-NPO-11243	c 07	N72-20154 *	NASA-CASE-NPO-12061-1	c 27	N76-16228 *	NASA-CASE-NPO-13464-2	c 44	N76-29704 *
NASA-CASE-NPO-11253	c 09	N72-17157 *	NASA-CASE-NPO-12070-1	c 28	N73-32606 *	NASA-CASE-NPO-13465-1	c 32	N76-31372 *
NASA-CASE-NPO-11264	c 07	N72-25174 *	NASA-CASE-NPO-12072	c 28	N72-22772 *	NASA-CASE-NPO-13474-1	c 45	N76-21742 *
NASA-CASE-NPO-11282	c 10	N73-16205 *	NASA-CASE-NPO-12087-1	c 74	N81-19898 *	NASA-CASE-NPO-13479-1	c 35	N77-10492 *
NASA-CASE-NPO-11283	c 09	N72-25260 *	NASA-CASE-NPO-12106	c 09	N73-15235 *	NASA-CASE-NPO-13482-1	c 44	N78-13526 *
NASA-CASE-NPO-11291-1	c 14	N73-30388 *	NASA-CASE-NPO-12107	c 08	N71-27255 *	NASA-CASE-NPO-13490-1	c 36	N76-31512 *

NASA-CASE-NPO-13497-1	c 44	N76-14602 *	#	NASA-CASE-NPO-13907-1	c 28	N80-10374 *	#	NASA-CASE-NPO-14369-1	c 44	N83-10501 *	#
NASA-CASE-NPO-13504-1	c 33	N75-30430 *	#	NASA-CASE-NPO-13909-1	c 33	N78-25319 *	#	NASA-CASE-NPO-14372-1	c 35	N80-26635 *	#
NASA-CASE-NPO-13506-1	c 35	N76-15435 *	#	NASA-CASE-NPO-13910-1	c 52	N79-27836 *	#	NASA-CASE-NPO-14381-1	c 31	N78-24387 *	#
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NASA-CASE-NPO-13512-1	c 33	N77-10428 *	#	NASA-CASE-NPO-13914-1	c 44	N78-31526 *	#	NASA-CASE-NPO-14382-1	c 43	N81-26509 *	#
NASA-CASE-NPO-13519-1	c 33	N76-19338 *	#	NASA-CASE-NPO-13918-1	c 76	N79-11920 *	#	NASA-CASE-NPO-14384-1	c 37	N80-10494 *	#
NASA-CASE-NPO-13528-1	c 09	N77-10071 *	#	NASA-CASE-NPO-13921-1	c 44	N79-14526 *	#	NASA-CASE-NPO-14388-1	c 37	N81-17432 *	#
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NASA-CASE-NPO-13531-1	c 36	N76-24553 *	#	NASA-CASE-NPO-13935-1	c 52	N79-14751 *	#	NASA-CASE-NPO-14402-1	c 52	N81-27783 *	#
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NASA-CASE-NPO-13541-1	c 37	N79-14383 *	#	NASA-CASE-NPO-13944-1	c 52	N79-14751 *	#	NASA-CASE-NPO-14424-1	c 33	N80-32650 *	#
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NASA-CASE-NPO-13553-1	c 35	N84-33766 *	#	NASA-CASE-NPO-13970-1	c 33	N81-20352 *	#	NASA-CASE-NPO-14448-1	c 74	N81-29963 *	#
NASA-CASE-NPO-13556-1	c 44	N77-10636 *	#	NASA-CASE-NPO-13982-1	c 32	N79-14267 *	#	NASA-CASE-NPO-14467-1	c 44	N79-31753 *	#
NASA-CASE-NPO-13560-1	c 44	N77-10636 *	#	NASA-CASE-NPO-13993-1	c 72	N79-13826 *	#	NASA-CASE-NPO-14473-1	c 37	N80-23654 *	#
NASA-CASE-NPO-13561-1	c 25	N77-32255 *	#	NASA-CASE-NPO-13999-1	c 35	N78-18395 *	#	NASA-CASE-NPO-14474-1	c 26	N80-14229 *	#
NASA-CASE-NPO-13567-1	c 44	N76-29701 *	#	NASA-CASE-NPO-14000-1	c 33	N79-24254 *	#	NASA-CASE-NPO-14477-1	c 28	N80-28536 *	#
NASA-CASE-NPO-13568-1	c 32	N76-21365 *	#	NASA-CASE-NPO-14001-1	c 27	N81-14076 *	#	NASA-CASE-NPO-14480-1	c 32	N80-20448 *	#
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NASA-CASE-NPO-13579-1	c 44	N78-17460 *	#	NASA-CASE-NPO-14009-1	c 32	N79-13214 *	#	NASA-CASE-NPO-14502-1	c 74	N81-17888 *	#
NASA-CASE-NPO-13579-2	c 44	N79-24433 *	#	NASA-CASE-NPO-14014-1	c 37	N79-10420 *	#	NASA-CASE-NPO-14505-1	c 33	N81-19393 *	#
NASA-CASE-NPO-13579-3	c 44	N79-24432 *	#	NASA-CASE-NPO-14019-1	c 32	N79-14268 *	#	NASA-CASE-NPO-14513-1	c 35	N81-14287 *	#
NASA-CASE-NPO-13579-4	c 44	N79-14529 *	#	NASA-CASE-NPO-14021-2	c 27	N80-16163 *	#	NASA-CASE-NPO-14519-1	c 32	N80-23524 *	#
NASA-CASE-NPO-13581-2	c 44	N78-31525 *	#	NASA-CASE-NPO-14022-1	c 32	N78-31321 *	#	NASA-CASE-NPO-14521-1	c 54	N79-20746 *	#
NASA-CASE-NPO-13587-1	c 32	N77-32342 *	#	NASA-CASE-NPO-14035-1	c 32	N83-19968 *	#	NASA-CASE-NPO-14521-1	c 37	N81-27519 *	#
NASA-CASE-NPO-13604-1	c 35	N76-31490 *	#	NASA-CASE-NPO-14054-1	c 32	N82-12297 *	#	NASA-CASE-NPO-14524-1	c 32	N80-24510 *	#
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NASA-CASE-NPO-15689-1	c 71	N84-23233 * #				NASA-CASE-XFR-05302	c 15	N71-23254 *
NASA-CASE-NPO-15696-1	c 33	N85-34333 * #	NASA-CASE-WLP-10002	c 15	N72-17451 * #	NASA-CASE-XFR-05421	c 15	N71-22994 *
NASA-CASE-NPO-15704-1	c 32	N85-34327 * #	NASA-CASE-WLP-10055-1	c 35	N84-28015 * #	NASA-CASE-XFR-05637	c 09	N71-19480 *
NASA-CASE-NPO-15706-1	c 35	N84-28017 * #	NASA-CASE-WLP-10055-2	c 35	N85-21598 * #	NASA-CASE-XFR-07172	c 05	N71-27234 *
NASA-CASE-NPO-15722-1	c 35	N85-29212 * #				NASA-CASE-XFR-07658-1	c 05	N71-26293 *
NASA-CASE-NPO-15743-1	c 32	N85-29118 * #	NASA-CASE-WOO-00428-1	c 32	N79-19186 * #	NASA-CASE-XFR-08403	c 05	N71-11202 *
NASA-CASE-NPO-15753-1	c 27	N84-33589 * #	NASA-CASE-WOO-00625	c 37	N78-17385 * #	NASA-CASE-XFR-09479	c 14	N69-27503 * #
NASA-CASE-NPO-15759-1	c 35	N85-21596 * #				NASA-CASE-XFR-10856	c 05	N71-11189 *
NASA-CASE-NPO-15767-1	c 23	N84-16255 * #	NASA-CASE-XAC-00001	c 15	N71-28952 * #			
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NASA-CASE-NPO-15786-1	c 76	N84-35112 * #	NASA-CASE-XAC-00042	c 14	N70-34816 * #	NASA-CASE-XGS-00174	c 08	N70-34743 *
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NASA-CASE-NPO-15790-1	c 36	N85-21631 * #	NASA-CASE-XAC-00060	c 09	N70-39915 * #	NASA-CASE-XGS-00359	c 14	N70-34158 *
NASA-CASE-NPO-15800-2	c 76	N85-22178 * #	NASA-CASE-XAC-00073	c 14	N70-34813 * #	NASA-CASE-XGS-00373	c 23	N71-15978 *
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NASA-CASE-NPO-15851-1	c 37	N85-21652 * #	NASA-CASE-XAC-00405	c 05	N70-41819 * #	NASA-CASE-XGS-00689	c 08	N70-34787 *
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NASA-CASE-NPO-15904-1	c 76	N86-28760 * #	NASA-CASE-XAC-00731	c 11	N71-15960 * #	NASA-CASE-XGS-00809	c 21	N70-35427 * #
NASA-CASE-NPO-15920-1	c 33	N85-21493 * #	NASA-CASE-XAC-00812	c 14	N71-15598 * #	NASA-CASE-XGS-00823	c 10	N71-15910 *
NASA-CASE-NPO-15924-1	c 25	N85-35253 * #	NASA-CASE-XAC-00942	c 10	N71-16042 * #	NASA-CASE-XGS-00824	c 15	N71-16078 *
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NASA-CASE-NPO-15935-1	c 33	N83-12334 * #	NASA-CASE-XAC-01158	c 15	N71-23051 * #	NASA-CASE-XGS-00886	c 03	N71-11053 *
NASA-CASE-NPO-15939-1	c 43	N86-19711 * #	NASA-CASE-XAC-01404	c 05	N70-41581 * #	NASA-CASE-XGS-00938	c 32	N70-41367 *
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NASA-CASE-NPO-15960-1	c 37	N86-19604 * #	NASA-CASE-XAC-01662	c 14	N71-23037 * #	NASA-CASE-XGS-01013	c 14	N71-23725 *
NASA-CASE-NPO-15977-1-CU	c 33	N86-20673 * #	NASA-CASE-XAC-01677	c 09	N71-20816 * #	NASA-CASE-XGS-01021	c 08	N71-21042 *
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NASA-CASE-NPO-15982-1	c 60	N85-20680 * #	NASA-CASE-XAC-02405	c 09	N71-16089 * #	NASA-CASE-XGS-01023	c 14	N71-22992 *
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NASA-CASE-XGS-01231	c 14	N70-41676 *	NASA-CASE-XGS-05180	c 18	N71-25881 *	NASA-CASE-XLA-00204	c 32	N70-36536 *
NASA-CASE-XGS-01245-1	c 35	N79-33449 *	NASA-CASE-XGS-05211	c 07	N69-39980 *	NASA-CASE-XLA-00210	c 30	N70-40309 *
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NASA-CASE-XGS-02441	c 15	N70-41629 *	NASA-CASE-XGS-10518	c 16	N71-28554 *	NASA-CASE-XLA-00781	c 09	N71-22999 *
NASA-CASE-XGS-02554	c 31	N71-21064 *	NASA-CASE-XGS-11177	c 09	N71-27001 *	NASA-CASE-XLA-00791	c 03	N70-39930 *
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NASA-CASE-XGS-02816	c 07	N69-24323 *	NASA-CASE-XKS-02582	c 15	N71-21234 *	NASA-CASE-XLA-00939	c 11	N71-15926 *
NASA-CASE-XGS-02884	c 15	N71-22705 *	NASA-CASE-XKS-03338	c 15	N71-24043 *	NASA-CASE-XLA-00941	c 14	N71-23240 *
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NASA-CASE-XGS-03427	c 10	N71-23029 *	NASA-CASE-XKS-07953	c 15	N71-26134 *	NASA-CASE-XLA-01163	c 21	N71-15582 *
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NASA-CASE-XGS-03431	c 21	N71-15642 *	NASA-CASE-XKS-08485	c 07	N71-19493 *	NASA-CASE-XLA-01220	c 02	N70-41863 *
NASA-CASE-XGS-03501	c 09	N71-20864 *	NASA-CASE-XKS-09340	c 07	N71-24614 *	NASA-CASE-XLA-01243	c 33	N71-22792 *
NASA-CASE-XGS-03502	c 10	N71-20852 *	NASA-CASE-XKS-09348	c 09	N71-13521 *	NASA-CASE-XLA-01262	c 15	N71-21404 *
NASA-CASE-XGS-03505	c 03	N71-10608 *	NASA-CASE-XKS-10543	c 07	N71-26292 *	NASA-CASE-XLA-01288	c 09	N69-21470 *
NASA-CASE-XGS-03532	c 14	N71-17627 *	NASA-CASE-XKS-10804	c 05	N71-24606 *	NASA-CASE-XLA-01290	c 02	N70-42016 *
NASA-CASE-XGS-03556	c 27	N70-35534 *				NASA-CASE-XLA-01291	c 33	N70-36617 *
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NASA-CASE-XGS-03736	c 14	N72-22443 *	NASA-CASE-XLA-00087	c 02	N70-33332 *	NASA-CASE-XLA-01339	c 31	N71-15692 *
NASA-CASE-XGS-03864	c 15	N69-24320 *	NASA-CASE-XLA-00100	c 14	N69-36807 *	NASA-CASE-XLA-01353	c 14	N70-41366 *
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NASA-CASE-XGS-04173	c 19	N71-26674 *	NASA-CASE-XLA-00115	c 03	N70-33343 *	NASA-CASE-XLA-01401	c 15	N71-21179 *
NASA-CASE-XGS-04175	c 15	N71-18579 *	NASA-CASE-XLA-00117	c 31	N71-17680 *	NASA-CASE-XLA-01441	c 15	N70-41679 *
NASA-CASE-XGS-04224	c 10	N71-26418 *	NASA-CASE-XLA-00118	c 05	N70-33285 *	NASA-CASE-XLA-01446	c 15	N71-21528 *
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NASA-CASE-XGS-04548	c 15	N71-24045 *	NASA-CASE-XLA-00138	c 31	N70-37981 *	NASA-CASE-XLA-01584	c 02	N70-36825 *
NASA-CASE-XGS-04554	c 15	N69-39786 *	NASA-CASE-XLA-00141	c 09	N70-33312 *	NASA-CASE-XLA-01731	c 14	N71-23269 *
NASA-CASE-XGS-04765	c 08	N71-18693 *	NASA-CASE-XLA-00142	c 02	N70-33286 *	NASA-CASE-XLA-01745	c 32	N71-21045 *
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NASA-CASE-XGS-04767	c 08	N71-12494 *	NASA-CASE-XLA-00149	c 31	N70-37938 *	NASA-CASE-XLA-01782	c 14	N69-39975 *
NASA-CASE-XGS-04768	c 08	N71-19437 *	NASA-CASE-XLA-00154	c 28	N70-33374 *	NASA-CASE-XLA-01787	c 14	N71-26136 *
NASA-CASE-XGS-04799	c 18	N71-24183 *	NASA-CASE-XLA-00158	c 26	N70-36805 *	NASA-CASE-XLA-01787	c 11	N71-16028 *
NASA-CASE-XGS-04808	c 03	N69-25146 *	NASA-CASE-XLA-00165	c 31	N70-33242 *	NASA-CASE-XLA-01791	c 14	N71-22991 *
NASA-CASE-XGS-04879	c 14	N71-20428 *	NASA-CASE-XLA-00166	c 02	N70-34178 *	NASA-CASE-XLA-01794	c 33	N71-21586 *
NASA-CASE-XGS-04987	c 08	N71-20571 *	NASA-CASE-XLA-00183	c 14	N70-40239 *	NASA-CASE-XLA-01804	c 02	N70-34160 *
NASA-CASE-XGS-04993	c 14	N71-17574 *	NASA-CASE-XLA-00188	c 15	N71-22874 *	NASA-CASE-XLA-01807	c 15	N71-10799 *
NASA-CASE-XGS-04994	c 09	N69-21543 *	NASA-CASE-XLA-00189	c 33	N70-36846 *	NASA-CASE-XLA-01808	c 15	N71-20740 *

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NASA-CASE-XLA-02758	c 14	N71-18481 *	NASA-CASE-XLA-08966-1	c 17	N71-25903 *	NASA-CASE-XLE-01092	c 15	N71-22797 *	#
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NASA-CASE-XLE-04946	c 17	N71-24911 *	NASA-CASE-XMF-01772	c 11	N70-41677 *	NASA-CASE-XMF-07808	c 15	N71-23812 *
NASA-CASE-XLE-05033	c 15	N71-23810 *	NASA-CASE-XMF-01779	c 12	N71-20815 *	NASA-CASE-XMF-08217	c 03	N71-23239 *
NASA-CASE-XLE-05079	c 15	N71-17652 *	NASA-CASE-XMF-01813	c 28	N70-41582 *	NASA-CASE-XMF-08522	c 15	N71-19486 *
NASA-CASE-XLE-05130-2	c 15	N71-19570 *	NASA-CASE-XMF-01887	c 15	N71-10617 *	NASA-CASE-XMF-08523	c 31	N71-20396 *
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NASA-CASE-XLE-06461	c 17	N72-22530 *	NASA-CASE-XMF-02303	c 17	N71-23828 *	NASA-CASE-XMF-10040	c 15	N71-22877 *
NASA-CASE-XLE-06773	c 15	N71-23817 *	NASA-CASE-XMF-02307	c 14	N71-10779 *	NASA-CASE-XMF-10289	c 14	N71-23699 *
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NASA-CASE-XLE-06969	c 17	N71-24142 *	NASA-CASE-XMF-02392	c 32	N71-24285 *	NASA-CASE-XMF-10968	c 14	N71-24234 *
NASA-CASE-XLE-07087	c 06	N69-39889 *	NASA-CASE-XMF-02433	c 14	N71-10616 *	NASA-CASE-XMF-14032	c 20	N71-16340 *
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NASA-CASE-XLE-08917	c 15	N71-15597 *	NASA-CASE-XMF-02822	c 14	N70-41994 *	NASA-CASE-XMS-00784	c 05	N71-12335 *
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NASA-CASE-XMF-00148	c 28	N70-38710 *	NASA-CASE-XMF-03988	c 15	N71-21403 *	NASA-CASE-XMS-01554	c 10	N71-10578 *
NASA-CASE-XMF-00185	c 21	N70-34539 *	NASA-CASE-XMF-04042	c 15	N71-23023 *	NASA-CASE-XMS-01615	c 05	N70-41329 *
NASA-CASE-XMF-00324	c 09	N70-34596 *	NASA-CASE-XMF-04132	c 15	N69-27502 *	NASA-CASE-XMS-01618	c 14	N71-20741 *
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NASA-CASE-XMF-00389	c 31	N70-34176 *	NASA-CASE-XMF-04237	c 33	N71-16278 *	NASA-CASE-XMS-01905	c 12	N71-21089 *
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NASA-CASE-XMS-07487	c 15	N71-23255 *	NASA-CASE-XNP-01412	c 15	N70-42034 *	NASA-CASE-XNP-04780	c 06	N71-19687 *
NASA-CASE-XMS-07846-1	c 09	N69-21927 *	NASA-CASE-XNP-01458	c 04	N78-17031 *	NASA-CASE-XNP-04816	c 06	N69-39936 *
NASA-CASE-XMS-08589-1	c 09	N71-20569 *	NASA-CASE-XNP-01464	c 03	N71-10728 *	NASA-CASE-XNP-04817	c 14	N71-23225 *
NASA-CASE-XMS-09310	c 15	N71-22706 *	NASA-CASE-XNP-01466	c 10	N71-26434 *	NASA-CASE-XNP-04819	c 08	N71-23295 *
NASA-CASE-XMS-09352	c 09	N71-23316 *	NASA-CASE-XNP-01472	c 14	N70-41807 *	NASA-CASE-XNP-04869	c 11	N69-27468 *
NASA-CASE-XMS-09571	c 05	N71-19439 *	NASA-CASE-XNP-01501	c 21	N70-41930 *	NASA-CASE-XNP-05082	c 15	N70-41980 *
NASA-CASE-XMS-09610	c 07	N71-24825 *	NASA-CASE-XNP-01587	c 15	N70-41310 *	NASA-CASE-XNP-05219	c 16	N71-15550 *
NASA-CASE-XMS-09632-1	c 05	N71-11203 *	NASA-CASE-XNP-01641	c 15	N71-22997 *	NASA-CASE-XNP-05231	c 14	N73-28491 *
NASA-CASE-XMS-09635	c 05	N71-24823 *	NASA-CASE-XNP-01659	c 14	N71-23039 *	NASA-CASE-XNP-05254	c 07	N71-20791 *
NASA-CASE-XMS-09636	c 05	N71-12344 *	NASA-CASE-XNP-01660	c 14	N71-23036 *	NASA-CASE-XNP-05297	c 15	N71-23811 *
NASA-CASE-XMS-09637-1	c 05	N71-24730 *	NASA-CASE-XNP-01735	c 07	N71-22750 *	NASA-CASE-XNP-05381	c 09	N71-20842 *
NASA-CASE-XMS-09652-1	c 05	N71-26333 *	NASA-CASE-XNP-01747	c 15	N71-23024 *	NASA-CASE-XNP-05382	c 10	N71-23544 *
NASA-CASE-XMS-09653	c 54	N78-17680 *	NASA-CASE-XNP-01749	c 27	N70-41897 *	NASA-CASE-XNP-05415	c 08	N71-12505 *
NASA-CASE-XMS-09690	c 33	N72-25913 *	NASA-CASE-XNP-01753	c 08	N71-22897 *	NASA-CASE-XNP-05429	c 26	N71-21824 *
NASA-CASE-XMS-09691-1	c 18	N71-15545 *	NASA-CASE-XNP-01848	c 15	N71-28959 *	NASA-CASE-XNP-05524	c 33	N71-24876 *
NASA-CASE-XMS-10269	c 05	N71-24147 *	NASA-CASE-XNP-01855	c 15	N71-28937 *	NASA-CASE-XNP-05530	c 14	N73-32321 *
NASA-CASE-XMS-10660-1	c 15	N71-25975 *	NASA-CASE-XNP-01951	c 09	N70-41929 *	NASA-CASE-XNP-05535	c 14	N71-23040 *
NASA-CASE-XMS-10984-1	c 10	N71-19417 *	NASA-CASE-XNP-01954	c 28	N71-28850 *	NASA-CASE-XNP-05612	c 09	N69-21468 *
NASA-CASE-XMS-10993	c 15	N71-28936 *	NASA-CASE-XNP-01959	c 26	N71-23043 *	NASA-CASE-XNP-05634	c 15	N71-24834 *
NASA-CASE-XMS-12158-1	c 31	N69-27499 *	NASA-CASE-XNP-01960	c 09	N71-23027 *	NASA-CASE-XNP-05821	c 03	N71-11056 *
NASA-CASE-XMS-13052	c 14	N71-20427 *	NASA-CASE-XNP-01961	c 26	N71-29156 *	NASA-CASE-XNP-05975	c 15	N69-23185 *
NASA-CASE-XNP-00214	c 15	N70-36908 *	NASA-CASE-XNP-01962	c 32	N70-41370 *	NASA-CASE-XNP-06028	c 09	N71-23189 *
NASA-CASE-XNP-00217	c 28	N70-38181 *	NASA-CASE-XNP-02029	c 14	N70-41955 *	NASA-CASE-XNP-06031	c 15	N71-15806 *
NASA-CASE-XNP-00234	c 28	N70-38645 *	NASA-CASE-XNP-02092	c 15	N70-42033 *	NASA-CASE-XNP-06032	c 09	N69-21926 *
NASA-CASE-XNP-00249	c 28	N70-38249 *	NASA-CASE-XNP-02139	c 18	N71-24184 *	NASA-CASE-XNP-06234	c 10	N71-27137 *
NASA-CASE-XNP-00250	c 11	N71-28779 *	NASA-CASE-XNP-02140	c 09	N71-23097 *	NASA-CASE-XNP-06503	c 23	N71-29049 *
NASA-CASE-XNP-00294	c 21	N70-36938 *	NASA-CASE-XNP-02251	c 12	N71-20896 *	NASA-CASE-XNP-06505	c 10	N71-24799 *
NASA-CASE-XNP-00384	c 09	N71-13530 *	NASA-CASE-XNP-02278	c 15	N71-28951 *	NASA-CASE-XNP-06506	c 03	N71-11050 *
NASA-CASE-XNP-00416	c 15	N70-38947 *	NASA-CASE-XNP-02340	c 23	N69-24332 *	NASA-CASE-XNP-06507	c 09	N71-23548 *
NASA-CASE-XNP-00425	c 11	N70-38202 *	NASA-CASE-XNP-02341	c 15	N71-21531 *	NASA-CASE-XNP-06508	c 18	N69-39895 *
NASA-CASE-XNP-00431	c 09	N70-38998 *	NASA-CASE-XNP-02389	c 07	N71-28900 *	NASA-CASE-XNP-06509	c 14	N71-23226 *
NASA-CASE-XNP-00432	c 08	N70-35423 *	NASA-CASE-XNP-02500	c 18	N71-27397 *	NASA-CASE-XNP-06510	c 14	N71-23797 *
NASA-CASE-XNP-00438	c 21	N70-35089 *	NASA-CASE-XNP-02507	c 31	N71-17679 *	NASA-CASE-XNP-06611	c 07	N71-26102 *
NASA-CASE-XNP-00449	c 14	N70-35220 *	NASA-CASE-XNP-02588	c 15	N71-18613 *	NASA-CASE-XNP-06914	c 15	N71-21489 *
NASA-CASE-XNP-00450	c 15	N70-38603 *	NASA-CASE-XNP-02592	c 24	N71-20518 *	NASA-CASE-XNP-06933	c 14	N73-32321 *
NASA-CASE-XNP-00459	c 11	N70-38675 *	NASA-CASE-XNP-02595	c 31	N71-21881 *	NASA-CASE-XNP-06936	c 15	N71-26895 *
NASA-CASE-XNP-00463	c 33	N70-36847 *	NASA-CASE-XNP-02654	c 10	N70-42032 *	NASA-CASE-XNP-06937	c 09	N71-19516 *
NASA-CASE-XNP-00465	c 21	N70-35395 *	NASA-CASE-XNP-02713	c 10	N69-39888 *	NASA-CASE-XNP-06942	c 28	N71-23293 *
NASA-CASE-XNP-00476	c 15	N70-38620 *	NASA-CASE-XNP-02723	c 07	N70-41680 *	NASA-CASE-XNP-06957	c 14	N71-21088 *
NASA-CASE-XNP-00477	c 08	N73-26045 *	NASA-CASE-XNP-02748	c 08	N71-22749 *	NASA-CASE-XNP-07040	c 08	N71-12500 *
NASA-CASE-XNP-00540	c 09	N70-35382 *	NASA-CASE-XNP-02778	c 08	N71-22710 *	NASA-CASE-XNP-07169	c 15	N73-32362 *
NASA-CASE-XNP-00595	c 15	N70-34967 *	NASA-CASE-XNP-02791	c 07	N71-23026 *	NASA-CASE-XNP-07477	c 09	N71-26092 *
NASA-CASE-XNP-00597	c 18	N71-23088 *	NASA-CASE-XNP-02792	c 14	N71-28958 *	NASA-CASE-XNP-07478	c 14	N69-21923 *
NASA-CASE-XNP-00610	c 28	N70-36910 *	NASA-CASE-XNP-02839	c 28	N70-41922 *	NASA-CASE-XNP-07481	c 25	N69-21929 *
NASA-CASE-XNP-00611	c 09	N70-35219 *	NASA-CASE-XNP-02862-1	c 15	N71-26294 *	NASA-CASE-XNP-07659	c 06	N71-22975 *
NASA-CASE-XNP-00612	c 11	N70-38182 *	NASA-CASE-XNP-02888	c 18	N71-21068 *	NASA-CASE-XNP-08124-2	c 06	N73-13129 *
NASA-CASE-XNP-00614	c 14	N70-36907 *	NASA-CASE-XNP-02899-1	c 33	N79-21265 *	NASA-CASE-XNP-08124	c 15	N71-27184 *
NASA-CASE-XNP-00637	c 14	N70-40273 *	NASA-CASE-XNP-02923	c 28	N71-23081 *	NASA-CASE-XNP-08274	c 10	N71-13537 *
NASA-CASE-XNP-00644	c 03	N70-36803 *	NASA-CASE-XNP-02982	c 31	N70-41855 *	NASA-CASE-XNP-08567	c 09	N71-26000 *
NASA-CASE-XNP-00646	c 14	N70-35666 *	NASA-CASE-XNP-02983	c 14	N71-21091 *	NASA-CASE-XNP-08680	c 14	N71-22995 *
NASA-CASE-XNP-00650	c 27	N71-28929 *	NASA-CASE-XNP-03063	c 17	N71-23365 *	NASA-CASE-XNP-08832	c 08	N71-12506 *
NASA-CASE-XNP-00676	c 15	N70-38996 *	NASA-CASE-XNP-03128	c 10	N70-41991 *	NASA-CASE-XNP-08835-1	c 37	N80-14395 *
NASA-CASE-XNP-00683	c 09	N70-35425 *	NASA-CASE-XNP-03134	c 07	N71-10676 *	NASA-CASE-XNP-08836	c 09	N71-12515 *
NASA-CASE-XNP-00708	c 14	N70-35394 *	NASA-CASE-XNP-03250	c 06	N71-23500 *	NASA-CASE-XNP-08837	c 18	N71-16210 *
NASA-CASE-XNP-00710	c 15	N71-10778 *	NASA-CASE-XNP-03263	c 09	N71-18843 *	NASA-CASE-XNP-08840	c 23	N71-16365 *
NASA-CASE-XNP-00732	c 28	N70-41447 *	NASA-CASE-XNP-03282	c 28	N72-20758 *	NASA-CASE-XNP-08875	c 10	N71-23099 *
			NASA-CASE-XNP-03332	c 09	N71-10618 *	NASA-CASE-XNP-08876	c 17	N73-28573 *



NASA-CASE-XNP-08877	c 15	N71-23025 *	US-PATENT-APPL-SN-028301	c 27	N82-24338 *	US-PATENT-APPL-SN-102004	c 37	N81-26447 *
NASA-CASE-XNP-08880	c 09	N71-24808 *	US-PATENT-APPL-SN-030831	c 25	N82-23282 *	US-PATENT-APPL-SN-102412	c 25	N72-33696 *
NASA-CASE-XNP-08881	c 17	N71-28747 *	US-PATENT-APPL-SN-032305	c 15	N82-24272 *	US-PATENT-APPL-SN-102593	c 37	N82-16408 *
NASA-CASE-XNP-08882	c 15	N69-39935 *	US-PATENT-APPL-SN-032307	c 44	N81-24519 *	US-PATENT-APPL-SN-103077	c 25	N72-32688 *
NASA-CASE-XNP-08883	c 23	N71-16101 *	US-PATENT-APPL-SN-034104	c 08	N81-19130 *	US-PATENT-APPL-SN-103078	c 15	N73-12486 *
NASA-CASE-XNP-08897	c 15	N71-17694 *	US-PATENT-APPL-SN-034531	c 52	N81-28740 *	US-PATENT-APPL-SN-103091	c 37	N74-23070 *
NASA-CASE-XNP-08907	c 23	N71-29123 *	US-PATENT-APPL-SN-037066	c 25	N81-14016 *	US-PATENT-APPL-SN-103229	c 14	N72-22439 *
NASA-CASE-XNP-08961	c 14	N71-24809 *	US-PATENT-APPL-SN-037072	c 31	N81-33319 *	US-PATENT-APPL-SN-103230	c 15	N73-14468 *
NASA-CASE-XNP-09205	c 14	N71-17657 *	US-PATENT-APPL-SN-037194	c 37	N84-28081 *	US-PATENT-APPL-SN-10329	c 09	N72-25251 *
NASA-CASE-XNP-09225	c 09	N69-24333 *	US-PATENT-APPL-SN-037560	c 74	N81-29963 *	US-PATENT-APPL-SN-103551	c 31	N73-14854 *
NASA-CASE-XNP-09227	c 15	N69-24319 *	US-PATENT-APPL-SN-038550	c 33	N83-18996 *	US-PATENT-APPL-SN-103836	c 37	N80-18402 *
NASA-CASE-XNP-09228	c 09	N69-27500 *	US-PATENT-APPL-SN-038980	c 07	N81-14999 *	US-PATENT-APPL-SN-103836	c 37	N80-24443 *
NASA-CASE-XNP-09450	c 10	N71-18723 *	US-PATENT-APPL-SN-039031	c 32	N80-28578 *	US-PATENT-APPL-SN-104047	c 15	N72-31483 *
NASA-CASE-XNP-09451	c 06	N71-26754 *	US-PATENT-APPL-SN-041141	c 36	N82-13415 *	US-PATENT-APPL-SN-104048	c 31	N73-14855 *
NASA-CASE-XNP-09452	c 15	N69-27540 *	US-PATENT-APPL-SN-041142	c 32	N81-15179 *	US-PATENT-APPL-SN-104187	c 14	N70-36618 *
NASA-CASE-XNP-09453	c 08	N71-19420 *	US-PATENT-APPL-SN-041143	c 60	N83-25378 *	US-PATENT-APPL-SN-104188	c 09	N70-34819 *
NASA-CASE-XNP-09461	c 28	N72-23809 *	US-PATENT-APPL-SN-041145	c 25	N82-12166 *	US-PATENT-APPL-SN-104346	c 14	N73-28488 *
NASA-CASE-XNP-09462	c 14	N71-17584 *	US-PATENT-APPL-SN-041164	c 33	N81-19392 *	US-PATENT-APPL-SN-104884	c 15	N72-33476 *
NASA-CASE-XNP-09469	c 24	N71-25555 *	US-PATENT-APPL-SN-043911	c 05	N82-26277 *	US-PATENT-APPL-SN-104885	c 14	N73-24472 *
NASA-CASE-XNP-09572	c 14	N71-15621 *	US-PATENT-APPL-SN-043912	c 43	N81-17499 *	US-PATENT-APPL-SN-105518	c 23	N71-15978 *
NASA-CASE-XNP-09698	c 15	N71-18580 *	US-PATENT-APPL-SN-043913	c 54	N81-27806 *	US-PATENT-APPL-SN-106106	c 91	N74-13130 *
NASA-CASE-XNP-09699	c 06	N71-24607 *	US-PATENT-APPL-SN-043941	c 44	N81-19558 *	US-PATENT-APPL-SN-106118	c 32	N80-16261 *
NASA-CASE-XNP-09701	c 14	N71-26475 *	US-PATENT-APPL-SN-043942	c 06	N82-16075 *	US-PATENT-APPL-SN-106119	c 35	N82-15381 *
NASA-CASE-XNP-09702	c 15	N71-17654 *	US-PATENT-APPL-SN-043943	c 33	N82-24419 *	US-PATENT-APPL-SN-106135	c 28	N70-34294 *
NASA-CASE-XNP-09704	c 12	N71-18615 *	US-PATENT-APPL-SN-043944	c 24	N82-24296 *	US-PATENT-APPL-SN-106136	c 33	N82-26572 *
NASA-CASE-XNP-09744	c 27	N71-16392 *	US-PATENT-APPL-SN-043945	c 47	N82-24779 *	US-PATENT-APPL-SN-106188	c 27	N80-16163 *
NASA-CASE-XNP-09750	c 14	N69-39937 *	US-PATENT-APPL-SN-044431	c 33	N81-27395 *	US-PATENT-APPL-SN-106192	c 34	N83-28356 *
NASA-CASE-XNP-09752	c 14	N69-21541 *	US-PATENT-APPL-SN-044432	c 52	N81-20703 *	US-PATENT-APPL-SN-106424	c 17	N73-24569 *
NASA-CASE-XNP-09755	c 46	N74-23069 *	US-PATENT-APPL-SN-046739	c 54	N81-24724 *	US-PATENT-APPL-SN-106465	c 30	N73-12884 *
NASA-CASE-XNP-09759	c 08	N71-24891 *	US-PATENT-APPL-SN-051269	c 33	N81-24338 *	US-PATENT-APPL-SN-107298	c 32	N73-13921 *
NASA-CASE-XNP-09763	c 14	N71-20461 *	US-PATENT-APPL-SN-051270	c 32	N80-32604 *	US-PATENT-APPL-SN-107376	c 15	N73-25513 *
NASA-CASE-XNP-09768	c 09	N71-12516 *	US-PATENT-APPL-SN-051271	c 33	N81-26359 *	US-PATENT-APPL-SN-107379	c 10	N72-33230 *
NASA-CASE-XNP-09770-2	c 15	N72-22483 *	US-PATENT-APPL-SN-051274	c 34	N81-26402 *	US-PATENT-APPL-SN-107380	c 28	N73-13773 *
NASA-CASE-XNP-09770-3	c 11	N71-20736 *	US-PATENT-APPL-SN-051275	c 44	N82-24640 *	US-PATENT-APPL-SN-107659	c 23	N73-20741 *
NASA-CASE-XNP-09770	c 15	N71-20440 *	US-PATENT-APPL-SN-051276	c 33	N81-33404 *	US-PATENT-APPL-SN-107866	c 17	N70-36616 *
NASA-CASE-XNP-09771	c 09	N71-24841 *	US-PATENT-APPL-SN-053566	c 09	N82-24212 *	US-PATENT-APPL-SN-107870	c 15	N70-36411 *
NASA-CASE-XNP-09775	c 09	N71-20445 *	US-PATENT-APPL-SN-053569	c 35	N81-19426 *	US-PATENT-APPL-SN-108107	c 37	N82-18601 *
NASA-CASE-XNP-09776	c 09	N69-39929 *	US-PATENT-APPL-SN-053571	c 31	N81-19343 *	US-PATENT-APPL-SN-10812	c 28	N70-40367 *
NASA-CASE-XNP-09785	c 08	N69-21928 *	US-PATENT-APPL-SN-053572	c 32	N82-23376 *	US-PATENT-APPL-SN-10827	c 14	N72-28436 *
NASA-CASE-XNP-09802	c 33	N71-15641 *	US-PATENT-APPL-SN-053562	c 33	N82-18494 *	US-PATENT-APPL-SN-108810	c 33	N72-22386 *
NASA-CASE-XNP-09808	c 09	N71-12518 *	US-PATENT-APPL-SN-054501	c 23	N82-16174 *	US-PATENT-APPL-SN-108824	c 31	N73-13898 *
NASA-CASE-XNP-09830	c 14	N71-26266 *	US-PATENT-APPL-SN-057465	c 37	N81-17433 *	US-PATENT-APPL-SN-109789	c 09	N70-34596 *
NASA-CASE-XNP-09832	c 30	N71-23723 *	US-PATENT-APPL-SN-057466	c 71	N81-15767 *	US-PATENT-APPL-SN-110402	c 09	N72-27226 *
NASA-CASE-XNP-10007-1	c 46	N74-23068 *	US-PATENT-APPL-SN-057526	c 52	N81-25662 *	US-PATENT-APPL-SN-110591	c 15	N70-39896 *
NASA-CASE-XNP-10475	c 15	N71-24679 *	US-PATENT-APPL-SN-060435	c 44	N81-24520 *	US-PATENT-APPL-SN-111436	c 33	N82-26569 *
NASA-CASE-XNP-10830	c 07	N71-11281 *	US-PATENT-APPL-SN-060449	c 07	N82-32366 *	US-PATENT-APPL-SN-111438	c 35	N81-29407 *
NASA-CASE-XNP-10843	c 07	N71-11267 *	US-PATENT-APPL-SN-061327	c 32	N83-13323 *	US-PATENT-APPL-SN-111439	c 74	N81-24900 *
NASA-CASE-XNP-10854	c 10	N71-26331 *	US-PATENT-APPL-SN-061555	c 44	N81-29524 *	US-PATENT-APPL-SN-111998	c 21	N73-30640 *
			US-PATENT-APPL-SN-061556	c 35	N81-19427 *	US-PATENT-APPL-SN-11220	c 14	N73-30389 *
NASA-TM-76884	c 24	N85-25436 *	US-PATENT-APPL-SN-061822	c 74	N83-19597 *	US-PATENT-APPL-SN-112366	c 06	N72-10138 *
			US-PATENT-APPL-SN-065676	c 35	N80-18364 *	US-PATENT-APPL-SN-112988	c 07	N72-32169 *
US-CLASS-60-39.07	c 07	N86-20389 *	US-PATENT-APPL-SN-065676	c 44	N81-12542 *	US-PATENT-APPL-SN-112998	c 14	N73-12445 *
			US-PATENT-APPL-SN-067595	c 08	N82-24205 *	US-PATENT-APPL-SN-112999	c 23	N72-25619 *
US-PATENT-APPL-SN-003693	c 52	N81-14612 *	US-PATENT-APPL-SN-067596	c 51	N81-28698 *	US-PATENT-APPL-SN-112999	c 32	N79-19186 *
US-PATENT-APPL-SN-006952	c 27	N81-14077 *	US-PATENT-APPL-SN-069485	c 33	N82-24420 *	US-PATENT-APPL-SN-113014	c 27	N81-24257 *
US-PATENT-APPL-SN-007083	c 26	N80-32484 *	US-PATENT-APPL-SN-070366	c 35	N82-11431 *	US-PATENT-APPL-SN-113015	c 37	N82-24491 *
US-PATENT-APPL-SN-008207	c 32	N80-23524 *	US-PATENT-APPL-SN-070771	c 27	N81-17260 *	US-PATENT-APPL-SN-114772	c 04	N76-26175 *
US-PATENT-APPL-SN-008208	c 37	N81-17432 *	US-PATENT-APPL-SN-070774	c 33	N82-26571 *	US-PATENT-APPL-SN-114846	c 14	N73-12444 *
US-PATENT-APPL-SN-008209	c 32	N81-25278 *	US-PATENT-APPL-SN-072857	c 24	N82-32417 *	US-PATENT-APPL-SN-114847	c 15	N72-28496 *
US-PATENT-APPL-SN-008210	c 05	N81-26114 *	US-PATENT-APPL-SN-073477	c 36	N82-32712 *	US-PATENT-APPL-SN-114848	c 11	N72-23215 *
US-PATENT-APPL-SN-008211	c 74	N81-17887 *	US-PATENT-APPL-SN-073579	c 33	N82-24415 *	US-PATENT-APPL-SN-114849	c 09	N72-27227 *
US-PATENT-APPL-SN-008212	c 44	N80-24741 *	US-PATENT-APPL-SN-076643	c 32	N81-29308 *	US-PATENT-APPL-SN-114873	c 09	N73-28083 *
US-PATENT-APPL-SN-009886	c 31	N80-32583 *	US-PATENT-APPL-SN-078521	c 32	N81-14186 *	US-PATENT-APPL-SN-115082	c 18	N73-13562 *
US-PATENT-APPL-SN-009887	c 28	N81-14103 *	US-PATENT-APPL-SN-078611	c 04	N81-21047 *	US-PATENT-APPL-SN-115083	c 07	N73-25160 *
US-PATENT-APPL-SN-009888	c 37	N81-14320 *	US-PATENT-APPL-SN-078612	c 46	N82-12685 *	US-PATENT-APPL-SN-115134	c 06	N73-13128 *
US-PATENT-APPL-SN-009889	c 33	N79-17134 *	US-PATENT-APPL-SN-079913	c 05	N82-28279 *	US-PATENT-APPL-SN-115536	c 33	N82-24417 *
US-PATENT-APPL-SN-009889	c 33	N81-27396 *	US-PATENT-APPL-SN-088663	c 28	N82-18401 *	US-PATENT-APPL-SN-115944	c 03	N71-34044 *
US-PATENT-APPL-SN-011737	c 27	N81-14078 *	US-PATENT-APPL-SN-089779	c 26	N81-25188 *	US-PATENT-APPL-SN-116777	c 09	N73-19235 *
US-PATENT-APPL-SN-014663	c 31	N81-25259 *	US-PATENT-APPL-SN-090584	c 74	N81-19896 *	US-PATENT-APPL-SN-116778	c 09	N72-33205 *
US-PATENT-APPL-SN-014664	c 44	N81-14389 *	US-PATENT-APPL-SN-0914	c 28	N70-38711 *	US-PATENT-APPL-SN-116786	c 07	N72-25172 *
US-PATENT-APPL-SN-015983	c 02	N80-28300 *	US-PATENT-APPL-SN-092141	c 27	N81-29229 *	US-PATENT-APPL-SN-116790	c 14	N73-30388 *
US-PATENT-APPL-SN-015995	c 08	N81-26152 *	US-PATENT-APPL-SN-092142	c 27	N82-11206 *	US-PATENT-APPL-SN-117575	c 08	N73-12177 *
US-PATENT-APPL-SN-015996	c 08	N81-24106 *	US-PATENT-APPL-SN-092143	c 32	N82-18443 *	US-PATENT-APPL-SN-118169	c 14	N70-35220 *
US-PATENT-APPL-SN-017885	c 32	N79-19195 *	US-PATENT-APPL-SN-092145	c 37	N82-12442 *	US-PATENT-APPL-SN-118200	c 15	N70-34274 *
US-PATENT-APPL-SN-017886	c 33	N81-33405 *	US-PATENT-APPL-SN-093714	c 44	N81-29525 *	US-PATENT-APPL-SN-118202	c 28	N70-38710 *
US-PATENT-APPL-SN-017887	c 33	N81-26358 *	US-PATENT-APPL-SN-095217	c 74	N81-19898 *	US-PATENT-APPL-SN-118203	c 14	N70-38602 *
US-PATENT-APPL-SN-017888	c 51	N80-16715 *	US-PATENT-APPL-SN-096255	c 37	N80-18400 *	US-PATENT-APPL-SN-118269	c 33	N73-26958 *
US-PATENT-APPL-SN-017889	c 02	N84-28732 *	US-PATENT-APPL-SN-096255	c 37	N82-19540 *	US-PATENT-APPL-SN-118270	c 09	N72-25260 *
US-PATENT-APPL-SN-017890	c 33	N81-15192 *	US-PATENT-APPL-SN-096257	c 37	N82-24490 *	US-PATENT-APPL-SN-11853	c 15	N71-28951 *
US-PATENT-APPL-SN-019541	c 02	N81-14968 *	US-PATENT-APPL-SN-098568	c 33	N82-11357 *	US-PATENT-APPL-SN-119282	c 03	N72-23048 *
US-PATENT-APPL-SN-023436	c 07	N80-32392 *	US-PATENT-APPL-SN-098569	c 44	N82-16474 *	US-PATENT-APPL-SN-119334	c 26	N80-19237 *
US-PATENT-APPL-SN-023437	c 62	N81-24779 *	US-PATENT-APPL-SN-098570	c 44	N82-16866 *	US-PATENT-APPL-SN-119335	c 37	N82-24494 *
US-PATENT-APPL-SN-023439	c 54	N79-20746 *	US-PATENT-APPL-SN-100611	c 37	N82-32732 *	US-PATENT-APPL-SN-119336	c 33	N82-24421 *
US-PATENT-APPL-SN-023439	c 37	N81-27519 *	US-PATENT-APPL-SN-100637	c 37	N75-18574 *	US-PATENT-APPL-SN-119337	c 24	N81-33325 *
US-PATENT-APPL-SN-023484	c 33	N81-20352 *	US-PATENT-APPL-SN-100639	c 14	N72-32452 *	US-PATENT-APPL-SN-119339	c 36	N82-28616 *
US-PATENT-APPL-SN-023485	c 33	N82-24418 *	US-PATENT-APPL-SN-100774	c 06	N72-25151 *	US-PATENT-APPL-SN-119340	c 35	N82-11432 *
US-PATENT-APPL-SN-023501	c 26	N80-28492 *	US-PATENT-APPL-SN-100774	c 06	N73-20301 *	US-PATENT-APPL-SN-120241	c 15	N73-24513 *
US-PATENT-APPL-SN-025162	c 35	N81-14287 *	US-PATENT-APPL-SN-100996	c 08	N73-13187 *	US-PATENT-APPL-SN-120795	c 07	N70-40202 *
US-PATENT-APPL-SN-025163	c 74	N80-33210 *	US-PATENT-APPL-SN-101029	c 31	N70-38676 *	US-PATENT-APPL-SN-120797	c 14	N70-36824 *
US-PATENT-APPL-SN-025301	c 07	N82-26293 *	US-PATENT-APPL-SN-101214	c 14	N73-26430 *	US-PATENT-APPL-SN-120803	c 08	N70-34743 *
US-PATENT-APPL-SN-027557	c 27	N81-19296 *	US-PATENT-APPL-SN-101354	c 10	N73-16205 *	US-PATENT-APPL-SN-121328	c 23	N72-11568 *
US-PATENT-APPL-SN-027558	c 36	N81-24422 *	US-PATENT-APPL-SN-10161	c 33	N72-20915 *	US-PATENT-APPL-SN-122965	c 35	N81-26431 *
US-PATENT-APPL-SN-027559	c 44	N81-17518 *	US-PATENT-APPL-SN-102001	c 36	N82-16396 *	US-PATENT-APPL-SN-122966	c 33	N80-19425 *
US-PATENT-APPL-SN-028300	c 27	N81-17259 *	US-PATENT-APPL-SN-102002	c 18	N81-29152 *	US-PATENT-APPL-SN-122966	c 33	N82-26568 *
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US-PATENT-APPL-SN-028301	c 27	N81-24256 *	US-PATENT-APPL-SN-102003	c 26	N82-30371 *			

US-PATENT-APPL-SN-123597	c 21	N70-34297 *	US-PATENT-APPL-SN-145208	c 34	N83-34221 *	US-PATENT-APPL-SN-164617	c 06	N81-17057 *
US-PATENT-APPL-SN-124909	c 14	N73-16483 *	US-PATENT-APPL-SN-145209	c 27	N82-29453 *	US-PATENT-APPL-SN-165910	c 32	N83-31918 *
US-PATENT-APPL-SN-125234	c 07	N73-16121 *	US-PATENT-APPL-SN-145210	c 09	N82-23254 *	US-PATENT-APPL-SN-166487	c 11	N73-32152 *
US-PATENT-APPL-SN-125235	c 51	N77-25789 *	US-PATENT-APPL-SN-145271	c 23	N81-29160 *	US-PATENT-APPL-SN-166541	c 14	N73-13415 *
US-PATENT-APPL-SN-125236	c 14	N73-26431 *	US-PATENT-APPL-SN-145272	c 33	N82-28545 *	US-PATENT-APPL-SN-166969	c 15	N70-34249 *
US-PATENT-APPL-SN-125979	c 09	N72-25255 *	US-PATENT-APPL-SN-145273	c 51	N81-32829 *	US-PATENT-APPL-SN-166970	c 15	N70-36409 *
US-PATENT-APPL-SN-126083	c 44	N83-10501 *	US-PATENT-APPL-SN-145282	c 74	N82-24072 *	US-PATENT-APPL-SN-167719	c 16	N73-33397 *
US-PATENT-APPL-SN-126084	c 33	N82-18493 *	US-PATENT-APPL-SN-145283	c 27	N81-24256 *	US-PATENT-APPL-SN-168008	c 14	N72-22445 *
US-PATENT-APPL-SN-126138	c 34	N82-13378 *	US-PATENT-APPL-SN-145284	c 27	N82-24338 *	US-PATENT-APPL-SN-168550	c 02	N70-34856 *
US-PATENT-APPL-SN-12661	c 14	N72-22437 *	US-PATENT-APPL-SN-146217	c 14	N71-34389 *	US-PATENT-APPL-SN-168650	c 14	N73-13416 *
US-PATENT-APPL-SN-127234	c 08	N70-35423 *	US-PATENT-APPL-SN-146935	c 14	N73-20475 *	US-PATENT-APPL-SN-168943	c 54	N82-26987 *
US-PATENT-APPL-SN-127480	c 37	N75-26371 *	US-PATENT-APPL-SN-146939	c 73	N75-30876 *	US-PATENT-APPL-SN-168944	c 37	N82-32731 *
US-PATENT-APPL-SN-127481	c 24	N75-26135 *	US-PATENT-APPL-SN-146940	c 05	N73-32014 *	US-PATENT-APPL-SN-169671	c 10	N73-30205 *
US-PATENT-APPL-SN-127618	c 02	N73-13008 *	US-PATENT-APPL-SN-147099	c 14	N73-13417 *	US-PATENT-APPL-SN-169962	c 34	N74-30608 *
US-PATENT-APPL-SN-127647	c 15	N73-27405 *	US-PATENT-APPL-SN-147103	c 10	N73-20253 *	US-PATENT-APPL-SN-169977	c 14	N70-34794 *
US-PATENT-APPL-SN-127915	c 02	N73-26004 *	US-PATENT-APPL-SN-147695	c 32	N84-27952 *	US-PATENT-APPL-SN-170440	c 15	N73-13462 *
US-PATENT-APPL-SN-127984	c 33	N75-27250 *	US-PATENT-APPL-SN-147700	c 27	N82-24339 *	US-PATENT-APPL-SN-170544	c 36	N77-19416 *
US-PATENT-APPL-SN-128229	c 35	N82-24471 *	US-PATENT-APPL-SN-147922	c 28	N73-19793 *	US-PATENT-APPL-SN-170680	c 34	N74-15652 *
US-PATENT-APPL-SN-128230	c 60	N84-28491 *	US-PATENT-APPL-SN-147940	c 14	N72-10375 *	US-PATENT-APPL-SN-170681	c 10	N73-25240 *
US-PATENT-APPL-SN-128419	c 14	N73-20477 *	US-PATENT-APPL-SN-147996	c 28	N73-24784 *	US-PATENT-APPL-SN-171011	c 28	N72-18786 *
US-PATENT-APPL-SN-129071	c 09	N72-25254 *	US-PATENT-APPL-SN-147997	c 15	N73-33477 *	US-PATENT-APPL-SN-171928	c 33	N82-26570 *
US-PATENT-APPL-SN-129072	c 15	N73-13467 *	US-PATENT-APPL-SN-148001	c 14	N70-34298 *	US-PATENT-APPL-SN-171933	c 37	N82-12441 *
US-PATENT-APPL-SN-129073	c 15	N73-13464 *	US-PATENT-APPL-SN-148756	c 15	N73-13466 *	US-PATENT-APPL-SN-171934	c 35	N82-26628 *
US-PATENT-APPL-SN-129379	c 37	N79-33468 *	US-PATENT-APPL-SN-149283	c 35	N74-17153 *	US-PATENT-APPL-SN-172098	c 33	N80-29583 *
US-PATENT-APPL-SN-129579	c 28	N70-35381 *	US-PATENT-APPL-SN-149526	c 52	N82-33996 *	US-PATENT-APPL-SN-172099	c 32	N82-27558 *
US-PATENT-APPL-SN-129778	c 60	N82-24839 *	US-PATENT-APPL-SN-149983	c 31	N72-11893 *	US-PATENT-APPL-SN-172100	c 27	N82-33520 *
US-PATENT-APPL-SN-129779	c 60	N82-16747 *	US-PATENT-APPL-SN-150040	c 36	N82-26589 *	US-PATENT-APPL-SN-172459	c 06	N73-16106 *
US-PATENT-APPL-SN-129780	c 44	N82-24639 *	US-PATENT-APPL-SN-150115	c 44	N82-19675 *	US-PATENT-APPL-SN-172727	c 33	N81-26360 *
US-PATENT-APPL-SN-129783	c 04	N82-23231 *	US-PATENT-APPL-SN-150119	c 15	N72-17455 *	US-PATENT-APPL-SN-172807	c 07	N73-28012 *
US-PATENT-APPL-SN-129793	c 33	N82-16340 *	US-PATENT-APPL-SN-15020	c 14	N70-34687 *	US-PATENT-APPL-SN-173081	c 28	N70-38606 *
US-PATENT-APPL-SN-129798	c 27	N81-27271 *	US-PATENT-APPL-SN-150215	c 33	N73-25952 *	US-PATENT-APPL-SN-173178	c 33	N77-21315 *
US-PATENT-APPL-SN-129799	c 27	N82-16389 *	US-PATENT-APPL-SN-150222	c 15	N72-14465 *	US-PATENT-APPL-SN-173185	c 23	N73-13660 *
US-PATENT-APPL-SN-130353	c 31	N73-14853 *	US-PATENT-APPL-SN-150223	c 15	N70-34699 *	US-PATENT-APPL-SN-173190	c 05	N73-32015 *
US-PATENT-APPL-SN-130496	c 36	N83-10417 *	US-PATENT-APPL-SN-150224	c 09	N72-21245 *	US-PATENT-APPL-SN-173518	c 60	N82-29013 *
US-PATENT-APPL-SN-132364	c 07	N83-36029 *	US-PATENT-APPL-SN-150225	c 03	N72-20033 *	US-PATENT-APPL-SN-173519	c 44	N82-26776 *
US-PATENT-APPL-SN-13266	c 05	N72-23085 *	US-PATENT-APPL-SN-150690	c 35	N79-33450 *	US-PATENT-APPL-SN-173520	c 31	N83-27058 *
US-PATENT-APPL-SN-134479	c 14	N70-33178 *	US-PATENT-APPL-SN-151112	c 15	N70-34814 *	US-PATENT-APPL-SN-173524	c 35	N82-32659 *
US-PATENT-APPL-SN-134481	c 11	N70-34815 *	US-PATENT-APPL-SN-151114	c 31	N70-34178 *	US-PATENT-APPL-SN-173981	c 14	N70-35666 *
US-PATENT-APPL-SN-134567	c 14	N73-16484 *	US-PATENT-APPL-SN-151411	c 07	N73-26118 *	US-PATENT-APPL-SN-174684	c 33	N75-31331 *
US-PATENT-APPL-SN-134568	c 06	N72-31141 *	US-PATENT-APPL-SN-151412	c 09	N73-32112 *	US-PATENT-APPL-SN-175267	c 14	N73-28486 *
US-PATENT-APPL-SN-134571	c 21	N73-13644 *	US-PATENT-APPL-SN-151413	c 14	N73-12447 *	US-PATENT-APPL-SN-175452	c 27	N81-27272 *
US-PATENT-APPL-SN-134573	c 09	N72-25257 *	US-PATENT-APPL-SN-151598	c 03	N70-34134 *	US-PATENT-APPL-SN-175452	c 27	N85-21347 *
US-PATENT-APPL-SN-134619	c 35	N79-33449 *	US-PATENT-APPL-SN-15222	c 18	N72-25539 *	US-PATENT-APPL-SN-175453	c 85	N82-33288 *
US-PATENT-APPL-SN-134658	c 15	N73-28515 *	US-PATENT-APPL-SN-152328	c 02	N74-20646 *	US-PATENT-APPL-SN-175497	c 08	N73-28045 *
US-PATENT-APPL-SN-134782	c 09	N70-36494 *	US-PATENT-APPL-SN-152849	c 15	N73-30457 *	US-PATENT-APPL-SN-175852	c 25	N73-25760 *
US-PATENT-APPL-SN-134855	c 44	N81-24521 *	US-PATENT-APPL-SN-153240	c 33	N86-19515 *	US-PATENT-APPL-SN-175881	c 09	N73-15235 *
US-PATENT-APPL-SN-135038	c 33	N83-31954 *	US-PATENT-APPL-SN-153245	c 74	N83-29032 *	US-PATENT-APPL-SN-175981	c 16	N70-30476 *
US-PATENT-APPL-SN-135039	c 33	N82-24416 *	US-PATENT-APPL-SN-153246	c 52	N82-29863 *	US-PATENT-APPL-SN-175983	c 31	N73-32750 *
US-PATENT-APPL-SN-135040	c 09	N82-11088 *	US-PATENT-APPL-SN-153268	c 02	N70-38011 *	US-PATENT-APPL-SN-177684	c 28	N70-34860 *
US-PATENT-APPL-SN-135056	c 37	N81-33483 *	US-PATENT-APPL-SN-153542	c 28	N73-32606 *	US-PATENT-APPL-SN-177753	c 07	N72-20154 *
US-PATENT-APPL-SN-135057	c 08	N82-32373 *	US-PATENT-APPL-SN-153543	c 08	N73-26176 *	US-PATENT-APPL-SN-177985	c 35	N74-15831 *
US-PATENT-APPL-SN-135058	c 25	N82-26396 *	US-PATENT-APPL-SN-153624	c 37	N75-27376 *	US-PATENT-APPL-SN-178192	c 25	N83-33977 *
US-PATENT-APPL-SN-136006	c 09	N72-28225 *	US-PATENT-APPL-SN-154094	c 33	N72-27959 *	US-PATENT-APPL-SN-178193	c 52	N82-29662 *
US-PATENT-APPL-SN-136007	c 09	N71-34212 *	US-PATENT-APPL-SN-154663	c 02	N81-26073 *	US-PATENT-APPL-SN-178195	c 35	N82-24470 *
US-PATENT-APPL-SN-136008	c 27	N74-13270 *	US-PATENT-APPL-SN-154663	c 09	N82-29330 *	US-PATENT-APPL-SN-178213	c 25	N70-33267 *
US-PATENT-APPL-SN-136085	c 17	N73-12547 *	US-PATENT-APPL-SN-154725	c 37	N82-24493 *	US-PATENT-APPL-SN-178215	c 25	N70-34661 *
US-PATENT-APPL-SN-136086	c 15	N73-19457 *	US-PATENT-APPL-SN-154726	c 25	N81-25159 *	US-PATENT-APPL-SN-178721	c 03	N70-35408 *
US-PATENT-APPL-SN-136253	c 28	N72-20767 *	US-PATENT-APPL-SN-154930	c 44	N76-14600 *	US-PATENT-APPL-SN-178771	c 23	N75-14834 *
US-PATENT-APPL-SN-136253	c 27	N74-12814 *	US-PATENT-APPL-SN-154933	c 14	N73-25463 *	US-PATENT-APPL-SN-180230	c 33	N83-18996 *
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US-PATENT-APPL-SN-137912	c 06	N72-21105 *	US-PATENT-APPL-SN-155595	c 26	N73-28710 *	US-PATENT-APPL-SN-180379	c 21	N70-35395 *
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US-PATENT-APPL-SN-138229	c 15	N73-22487 *	US-PATENT-APPL-SN-155598	c 15	N73-28516 *	US-PATENT-APPL-SN-180381	c 21	N70-35089 *
US-PATENT-APPL-SN-138230	c 32	N73-20740 *	US-PATENT-APPL-SN-156724	c 21	N73-13643 *	US-PATENT-APPL-SN-180382	c 28	N70-38645 *
US-PATENT-APPL-SN-138944	c 37	N82-26672 *	US-PATENT-APPL-SN-156725	c 14	N73-27377 *	US-PATENT-APPL-SN-180384	c 11	N70-38675 *
US-PATENT-APPL-SN-139006	c 09	N70-38604 *	US-PATENT-APPL-SN-156778	c 17	N72-28535 *	US-PATENT-APPL-SN-180391	c 28	N70-38249 *
US-PATENT-APPL-SN-139007	c 28	N70-37245 *	US-PATENT-APPL-SN-156790	c 25	N82-29371 *	US-PATENT-APPL-SN-180392	c 09	N71-13530 *
US-PATENT-APPL-SN-139012	c 03	N70-38713 *	US-PATENT-APPL-SN-157150	c 37	N84-33808 *	US-PATENT-APPL-SN-180394	c 15	N70-38603 *
US-PATENT-APPL-SN-139094	c 05	N73-32011 *	US-PATENT-APPL-SN-158530	c 27	N83-19900 *	US-PATENT-APPL-SN-180395	c 15	N70-36947 *
US-PATENT-APPL-SN-139250	c 04	N73-27052 *	US-PATENT-APPL-SN-158914	c 11	N70-36913 *	US-PATENT-APPL-SN-180396	c 11	N70-38202 *
US-PATENT-APPL-SN-139528	c 03	N72-25020 *	US-PATENT-APPL-SN-158916	c 05	N70-41819 *	US-PATENT-APPL-SN-180473	c 28	N73-27699 *
US-PATENT-APPL-SN-139596	c 33	N77-13315 *	US-PATENT-APPL-SN-159804	c 11	N70-38196 *	US-PATENT-APPL-SN-180683	c 10	N73-25241 *
US-PATENT-APPL-SN-140439	c 33	N75-19518 *	US-PATENT-APPL-SN-159857	c 05	N73-26072 *	US-PATENT-APPL-SN-180693	c 14	N73-27378 *
US-PATENT-APPL-SN-140443	c 09	N70-35219 *	US-PATENT-APPL-SN-159966	c 31	N73-26876 *	US-PATENT-APPL-SN-181023	c 15	N73-26472 *
US-PATENT-APPL-SN-140509	c 09	N70-35382 *	US-PATENT-APPL-SN-160093	c 04	N78-17031 *	US-PATENT-APPL-SN-181024	c 07	N73-26117 *
US-PATENT-APPL-SN-140946	c 18	N73-26572 *	US-PATENT-APPL-SN-160858	c 32	N73-26910 *	US-PATENT-APPL-SN-181828	c 02	N70-34158 *
US-PATENT-APPL-SN-140946	c 27	N74-27037 *	US-PATENT-APPL-SN-160860	c 18	N73-32437 *	US-PATENT-APPL-SN-181829	c 31	N70-38010 *
US-PATENT-APPL-SN-141220	c 33	N70-37979 *	US-PATENT-APPL-SN-161028	c 14	N73-19420 *	US-PATENT-APPL-SN-182033	c 33	N73-27796 *
US-PATENT-APPL-SN-142583	c 37	N79-33469 *	US-PATENT-APPL-SN-161254	c 27	N82-28441 *	US-PATENT-APPL-SN-182399	c 07	N73-28013 *
US-PATENT-APPL-SN-142662	c 23	N73-13661 *	US-PATENT-APPL-SN-161255	c 28	N81-24280 *	US-PATENT-APPL-SN-182692	c 15	N70-36535 *
US-PATENT-APPL-SN-142719	c 14	N73-14429 *	US-PATENT-APPL-SN-161256	c 44	N82-32841 *	US-PATENT-APPL-SN-182696	c 21	N70-36938 *
US-PATENT-APPL-SN-143078	c 08	N72-33172 *	US-PATENT-APPL-SN-161257	c 37	N85-29282 *	US-PATENT-APPL-SN-182698	c 15	N70-38620 *
US-PATENT-APPL-SN-143508	c 33	N74-12913 *	US-PATENT-APPL-SN-162100	c 33	N74-14939 *	US-PATENT-APPL-SN-182699	c 28	N70-38504 *
US-PATENT-APPL-SN-144139	c 11	N73-26238 *	US-PATENT-APPL-SN-162101	c 14	N73-24473 *	US-PATENT-APPL-SN-182879	c 37	N82-32730 *
US-PATENT-APPL-SN-144803	c 11	N70-34844 *	US-PATENT-APPL-SN-162230	c 26	N72-28781 *	US-PATENT-APPL-SN-182880	c 37	N83-19091 *
US-PATENT-APPL-SN-144804	c 14	N70-39898 *	US-PATENT-APPL-SN-162380	c 36	N74-21091 *	US-PATENT-APPL-SN-182881	c 18	N83-28064 *
US-PATENT-APPL-SN-14488	c 09	N70-38995 *	US-PATENT-APPL-SN-163122	c 07	N83-31603 *	US-PATENT-APPL-SN-182977	c 39	N74-13131 *
US-PATENT-APPL-SN-144958	c 09	N72-20206 *	US-PATENT-APPL-SN-163151	c 74	N75-25706 *	US-PATENT-APPL-SN-182978	c 16	N73-13489 *
US-PATENT-APPL-SN-145007	c 18	N70-36400 *	US-PATENT-APPL-SN-163152	c 17	N73-27446 *	US-PATENT-APPL-SN-183240	c 06	N73-30098 *
US-PATENT-APPL-SN-145026	c 06	N72-25152 *	US-PATENT-APPL-SN-163837	c 47	N83-32232 *	US-PATENT-APPL-SN-183707	c 23	N85-33187 *
US-PATENT-APPL-SN-145027	c 06	N73-32029 *	US-PATENT-APPL-SN-163838	c 23	N82-28353 *	US-PATENT-APPL-SN-183977	c 28	N70-38505 *
US-PAT								

US-PATENT-APPL-SN-184649	c 07	N70-36911 *	#	US-PATENT-APPL-SN-201904	c 15	N73-30458 *	#	US-PATENT-APPL-SN-221634	c 05	N70-34857 *	#
US-PATENT-APPL-SN-184960	c 06	N73-27980 *	#	US-PATENT-APPL-SN-201904	c 37	N74-15128 *	#	US-PATENT-APPL-SN-221637	c 26	N70-36805 *	#
US-PATENT-APPL-SN-185865	c 52	N80-33081 *	#	US-PATENT-APPL-SN-201904	c 37	N74-21064 *	#	US-PATENT-APPL-SN-221670	c 35	N77-14408 *	#
US-PATENT-APPL-SN-185867	c 44	N82-26777 *	#	US-PATENT-APPL-SN-202024	c 14	N70-34156 *	#	US-PATENT-APPL-SN-221685	c 35	N74-21062 *	#
US-PATENT-APPL-SN-185868	c 24	N84-16262 *	#	US-PATENT-APPL-SN-202029	c 11	N70-34786 *	#	US-PATENT-APPL-SN-221714	c 09	N73-32110 *	#
US-PATENT-APPL-SN-185869	c 71	N82-16800 *	#	US-PATENT-APPL-SN-202030	c 31	N71-10747 *	#	US-PATENT-APPL-SN-221833	c 09	N73-27150 *	#
US-PATENT-APPL-SN-186700	c 32	N74-12912 *	#	US-PATENT-APPL-SN-202228	c 34	N82-11399 *	#	US-PATENT-APPL-SN-221945	c 31	N70-36410 *	#
US-PATENT-APPL-SN-186861	c 74	N82-30071 *	#	US-PATENT-APPL-SN-202228	c 34	N85-29179 *	#	US-PATENT-APPL-SN-22265	c 14	N72-21405 *	#
US-PATENT-APPL-SN-187106	c 74	N83-17305 *	#	US-PATENT-APPL-SN-202750	c 19	N74-21015 *	#	US-PATENT-APPL-SN-223003	c 33	N70-36846 *	#
US-PATENT-APPL-SN-187143	c 36	N74-13205 *	#	US-PATENT-APPL-SN-202769	c 05	N73-29491 *	#	US-PATENT-APPL-SN-22320	c 14	N72-11365 *	#
US-PATENT-APPL-SN-187262	c 15	N73-27406 *	#	US-PATENT-APPL-SN-203271	c 51	N74-15778 *	#	US-PATENT-APPL-SN-223560	c 10	N73-32144 *	#
US-PATENT-APPL-SN-187365	c 35	N74-15127 *	#	US-PATENT-APPL-SN-203405	c 02	N73-26006 *	#	US-PATENT-APPL-SN-224231	c 06	N83-10040 *	#
US-PATENT-APPL-SN-187446	c 31	N70-37924 *	#	US-PATENT-APPL-SN-203409	c 28	N70-38197 *	#	US-PATENT-APPL-SN-224231	c 06	N84-34443 *	#
US-PATENT-APPL-SN-18776	c 28	N70-33284 *	#	US-PATENT-APPL-SN-203411	c 33	N70-34812 *	#	US-PATENT-APPL-SN-224232	c 36	N83-29680 *	#
US-PATENT-APPL-SN-18780	c 12	N70-33305 *	#	US-PATENT-APPL-SN-20370	c 33	N79-33393 *	#	US-PATENT-APPL-SN-224489	c 31	N74-18089 *	#
US-PATENT-APPL-SN-188160	c 74	N82-19029 *	#	US-PATENT-APPL-SN-204015	c 09	N70-38201 *	#	US-PATENT-APPL-SN-225499	c 37	N84-12491 *	#
US-PATENT-APPL-SN-188594	c 15	N70-34967 *	#	US-PATENT-APPL-SN-205047	c 15	N73-32360 *	#	US-PATENT-APPL-SN-225501	c 44	N82-28780 *	#
US-PATENT-APPL-SN-188836	c 35	N74-34857 *	#	US-PATENT-APPL-SN-205470	c 08	N71-18752 *	#	US-PATENT-APPL-SN-226476	c 10	N73-32143 *	#
US-PATENT-APPL-SN-188927	c 08	N73-32081 *	#	US-PATENT-APPL-SN-205675	c 14	N73-30386 *	#	US-PATENT-APPL-SN-226477	c 74	N74-27866 *	#
US-PATENT-APPL-SN-188928	c 37	N74-13178 *	#	US-PATENT-APPL-SN-206266	c 76	N74-20329 *	#	US-PATENT-APPL-SN-226551	c 06	N73-26100 *	#
US-PATENT-APPL-SN-189290	c 14	N73-27379 *	#	US-PATENT-APPL-SN-206266	c 76	N75-25730 *	#	US-PATENT-APPL-SN-227682	c 14	N70-34161 *	#
US-PATENT-APPL-SN-189375	c 18	N73-14584 *	#	US-PATENT-APPL-SN-206279	c 02	N73-26005 *	#	US-PATENT-APPL-SN-227683	c 02	N70-36804 *	#
US-PATENT-APPL-SN-189438	c 35	N76-15431 *	#	US-PATENT-APPL-SN-206279	c 05	N76-29217 *	#	US-PATENT-APPL-SN-227692	c 14	N70-40003 *	#
US-PATENT-APPL-SN-189648	c 32	N70-36536 *	#	US-PATENT-APPL-SN-206506	c 33	N82-24422 *	#	US-PATENT-APPL-SN-227977	c 25	N76-18245 *	#
US-PATENT-APPL-SN-18982	c 28	N72-11708 *	#	US-PATENT-APPL-SN-206698	c 15	N73-30459 *	#	US-PATENT-APPL-SN-228049	c 37	N79-33467 *	#
US-PATENT-APPL-SN-190316	c 17	N73-32414 *	#	US-PATENT-APPL-SN-207135	c 35	N83-27184 *	#	US-PATENT-APPL-SN-228150	c 05	N73-32013 *	#
US-PATENT-APPL-SN-191301	c 25	N74-12813 *	#	US-PATENT-APPL-SN-207211	c 07	N73-30113 *	#	US-PATENT-APPL-SN-228163	c 44	N74-19693 *	#
US-PATENT-APPL-SN-191744	c 33	N82-29538 *	#	US-PATENT-APPL-SN-209478	c 07	N70-38200 *	#	US-PATENT-APPL-SN-228189	c 35	N74-11283 *	#
US-PATENT-APPL-SN-191746	c 26	N81-16209 *	#	US-PATENT-APPL-SN-209479	c 15	N70-34850 *	#	US-PATENT-APPL-SN-228190	c 23	N73-30666 *	#
US-PATENT-APPL-SN-191746	c 26	N82-30371 *	#	US-PATENT-APPL-SN-209535	c 28	N73-24783 *	#	US-PATENT-APPL-SN-228229	c 27	N77-31308 *	#
US-PATENT-APPL-SN-191748	c 35	N82-31659 *	#	US-PATENT-APPL-SN-20960	c 15	N72-17453 *	#	US-PATENT-APPL-SN-228507	c 11	N70-38182 *	#
US-PATENT-APPL-SN-192016	c 03	N70-36778 *	#	US-PATENT-APPL-SN-209618	c 33	N75-19520 *	#	US-PATENT-APPL-SN-228569	c 14	N71-16014 *	#
US-PATENT-APPL-SN-192016	c 10	N73-20254 *	#	US-PATENT-APPL-SN-209618	c 33	N75-25041 *	#	US-PATENT-APPL-SN-229128	c 14	N73-28490 *	#
US-PATENT-APPL-SN-192016	c 10	N73-20254 *	#	US-PATENT-APPL-SN-209801	c 08	N70-40125 *	#	US-PATENT-APPL-SN-229143	c 09	N72-21248 *	#
US-PATENT-APPL-SN-192101	c 07	N73-24176 *	#	US-PATENT-APPL-SN-210405	c 74	N84-11921 *	#	US-PATENT-APPL-SN-229143	c 33	N77-26387 *	#
US-PATENT-APPL-SN-192101	c 07	N73-22076 *	#	US-PATENT-APPL-SN-210491	c 02	N81-19016 *	#	US-PATENT-APPL-SN-229231	c 35	N83-34272 *	#
US-PATENT-APPL-SN-192803	c 35	N76-16391 *	#	US-PATENT-APPL-SN-210498	c 35	N84-12444 *	#	US-PATENT-APPL-SN-229233	c 27	N83-31855 *	#
US-PATENT-APPL-SN-192803	c 35	N76-16391 *	#	US-PATENT-APPL-SN-210506	c 39	N83-32081 *	#	US-PATENT-APPL-SN-229239	c 31	N83-31897 *	#
US-PATENT-APPL-SN-192970	c 23	N73-30665 *	#	US-PATENT-APPL-SN-210632	c 26	N83-10170 *	#	US-PATENT-APPL-SN-229286	c 33	N71-29052 *	#
US-PATENT-APPL-SN-193456	c 10	N73-25243 *	#	US-PATENT-APPL-SN-211332	c 02	N74-10034 *	#	US-PATENT-APPL-SN-229287	c 35	N78-29421 *	#
US-PATENT-APPL-SN-193671	c 15	N73-12488 *	#	US-PATENT-APPL-SN-211411	c 11	N73-20267 *	#	US-PATENT-APPL-SN-229354	c 62	N74-14920 *	#
US-PATENT-APPL-SN-193672	c 54	N74-14845 *	#	US-PATENT-APPL-SN-211464	c 28	N70-36910 *	#	US-PATENT-APPL-SN-229413	c 14	N73-32323 *	#
US-PATENT-APPL-SN-193814	c 14	N73-30393 *	#	US-PATENT-APPL-SN-212028	c 09	N73-14214 *	#	US-PATENT-APPL-SN-229693	c 37	N84-22958 *	#
US-PATENT-APPL-SN-193947	c 14	N73-13420 *	#	US-PATENT-APPL-SN-212165	c 14	N73-25460 *	#	US-PATENT-APPL-SN-229916	c 46	N74-13011 *	#
US-PATENT-APPL-SN-193980	c 31	N74-13177 *	#	US-PATENT-APPL-SN-212173	c 02	N71-13421 *	#	US-PATENT-APPL-SN-230613	c 05	N83-27975 *	#
US-PATENT-APPL-SN-195061	c 05	N73-25125 *	#	US-PATENT-APPL-SN-212174	c 15	N70-34859 *	#	US-PATENT-APPL-SN-23132	c 08	N72-22163 *	#
US-PATENT-APPL-SN-195223	c 35	N83-21311 *	#	US-PATENT-APPL-SN-212496	c 03	N70-36803 *	#	US-PATENT-APPL-SN-231520	c 27	N71-29155 *	#
US-PATENT-APPL-SN-195226	c 31	N83-31895 *	#	US-PATENT-APPL-SN-212497	c 11	N71-28779 *	#	US-PATENT-APPL-SN-231543	c 07	N83-20944 *	#
US-PATENT-APPL-SN-195227	c 74	N83-32577 *	#	US-PATENT-APPL-SN-21263	c 01	N71-12217 *	#	US-PATENT-APPL-SN-231604	c 28	N70-39925 *	#
US-PATENT-APPL-SN-195228	c 74	N83-10900 *	#	US-PATENT-APPL-SN-212900	c 14	N73-25462 *	#	US-PATENT-APPL-SN-231662	c 14	N73-30392 *	#
US-PATENT-APPL-SN-195346	c 15	N70-36492 *	#	US-PATENT-APPL-SN-212921	c 07	N73-20176 *	#	US-PATENT-APPL-SN-232021	c 04	N74-13420 *	#
US-PATENT-APPL-SN-195347	c 31	N70-34135 *	#	US-PATENT-APPL-SN-212949	c 35	N83-35338 *	#	US-PATENT-APPL-SN-232318	c 11	N71-15960 *	#
US-PATENT-APPL-SN-195547	c 33	N81-15194 *	#	US-PATENT-APPL-SN-212977	c 15	N73-30460 *	#	US-PATENT-APPL-SN-232914	c 15	N70-36412 *	#
US-PATENT-APPL-SN-195547	c 32	N83-18975 *	#	US-PATENT-APPL-SN-213004	c 14	N73-19421 *	#	US-PATENT-APPL-SN-233098	c 12	N73-25262 *	#
US-PATENT-APPL-SN-19572	c 35	N77-27368 *	#	US-PATENT-APPL-SN-213836	c 15	N70-38601 *	#	US-PATENT-APPL-SN-233173	c 12	N73-28144 *	#
US-PATENT-APPL-SN-19585	c 15	N72-25455 *	#	US-PATENT-APPL-SN-213949	c 07	N73-20175 *	#	US-PATENT-APPL-SN-233269	c 76	N82-30105 *	#
US-PATENT-APPL-SN-196399	c 05	N73-25161 *	#	US-PATENT-APPL-SN-214006	c 37	N74-18126 *	#	US-PATENT-APPL-SN-233270	c 52	N83-27578 *	#
US-PATENT-APPL-SN-196877	c 35	N84-17555 *	#	US-PATENT-APPL-SN-214084	c 37	N74-18123 *	#	US-PATENT-APPL-SN-233271	c 27	N83-34043 *	#
US-PATENT-APPL-SN-196898	c 38	N74-15130 *	#	US-PATENT-APPL-SN-214086	c 14	N73-30395 *	#	US-PATENT-APPL-SN-233519	c 20	N74-13502 *	#
US-PATENT-APPL-SN-196931	c 35	N73-33383 *	#	US-PATENT-APPL-SN-214089	c 35	N74-21018 *	#	US-PATENT-APPL-SN-233587	c 16	N72-22520 *	#
US-PATENT-APPL-SN-196970	c 15	N73-33383 *	#	US-PATENT-APPL-SN-214361	c 37	N83-32067 *	#	US-PATENT-APPL-SN-233743	c 37	N74-31179 *	#
US-PATENT-APPL-SN-197183	c 02	N76-22154 *	#	US-PATENT-APPL-SN-215108	c 08	N72-20176 *	#	US-PATENT-APPL-SN-234222	c 34	N85-21568 *	#
US-PATENT-APPL-SN-197548	c 09	N70-34502 *	#	US-PATENT-APPL-SN-21644	c 05	N72-22092 *	#	US-PATENT-APPL-SN-234223	c 35	N83-21312 *	#
US-PATENT-APPL-SN-197551	c 31	N70-34296 *	#	US-PATENT-APPL-SN-216710	c 12	N70-38997 *	#	US-PATENT-APPL-SN-234224	c 36	N83-34304 *	#
US-PATENT-APPL-SN-197553	c 08	N70-34778 *	#	US-PATENT-APPL-SN-216711	c 03	N70-34157 *	#	US-PATENT-APPL-SN-234225	c 33	N83-36357 *	#
US-PATENT-APPL-SN-197554	c 14	N70-35368 *	#	US-PATENT-APPL-SN-216939	c 14	N70-40400 *	#	US-PATENT-APPL-SN-234568	c 28	N70-34788 *	#
US-PATENT-APPL-SN-197689	c 31	N74-14133 *	#	US-PATENT-APPL-SN-217213	c 37	N74-11301 *	#	US-PATENT-APPL-SN-235162	c 08	N71-12501 *	#
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US-PATENT-APPL-SN-197870	c 14	N73-32322 *	#	US-PATENT-APPL-SN-217336	c 27	N82-29456 *	#	US-PATENT-APPL-SN-235268	c 36	N74-15145 *	#
US-PATENT-APPL-SN-198093	c 39	N83-20280 *	#	US-PATENT-APPL-SN-218585	c 27	N82-24340 *	#	US-PATENT-APPL-SN-235269	c 09	N73-30181 *	#
US-PATENT-APPL-SN-198285	c 09	N73-13208 *	#	US-PATENT-APPL-SN-218586	c 36	N81-22344 *	#	US-PATENT-APPL-SN-235295	c 09	N73-30185 *	#
US-PATENT-APPL-SN-198289	c 14	N73-32326 *	#	US-PATENT-APPL-SN-218587	c 27	N82-28440 *	#	US-PATENT-APPL-SN-23532	c 07	N72-21117 *	#
US-PATENT-APPL-SN-198355	c 05	N72-15098 *	#	US-PATENT-APPL-SN-218588	c 27	N82-33521 *	#	US-PATENT-APPL-SN-235338	c 71	N74-31148 *	#
US-PATENT-APPL-SN-198362	c 14	N73-28489 *	#	US-PATENT-APPL-SN-218965	c 10	N73-32145 *	#	US-PATENT-APPL-SN-235363	c 74	N81-24907 *	#
US-PATENT-APPL-SN-198379	c 15	N73-32359 *	#	US-PATENT-APPL-SN-21906	c 09	N72-17157 *	#	US-PATENT-APPL-SN-235472	c 60	N84-28492 *	#
US-PATENT-APPL-SN-198472	c 27	N74-12812 *	#	US-PATENT-APPL-SN-219435	c 24	N74-27035 *	#	US-PATENT-APPL-SN-235588	c 28	N71-28928 *	#
US-PATENT-APPL-SN-198763	c 31	N74-18124 *	#	US-PATENT-APPL-SN-219436	c 15	N72-21489 *	#	US-PATENT-APPL-SN-235796	c 35	N82-28604 *	#
US-PATENT-APPL-SN-198763	c 31	N74-32920 *	#	US-PATENT-APPL-SN-219590	c 06	N73-32030 *	#	US-PATENT-APPL-SN-235797	c 44	N83-32175 *	#
US-PATENT-APPL-SN-198885	c 05	N73-27062 *	#	US-PATENT-APPL-SN-219640	c 74	N83-13978 *	#	US-PATENT-APPL-SN-235868	c 34	N83-29625 *	#
US-PATENT-APPL-SN-199199	c 25	N71-29184 *	#	US-PATENT-APPL-SN-219677	c 44	N82-31764 *	#	US-PATENT-APPL-SN-235957	c 14	N73-27376 *	#
US-PATENT-APPL-SN-199202	c 14	N70-40239 *	#	US-PATENT-APPL-SN-219678	c 44	N82-29709 *	#	US-PATENT-APPL-SN-235962	c 36	N74-11313 *	#
US-PATENT-APPL-SN-19971	c 09	N70-33312 *	#	US-PATENT-APPL-SN-219680	c 27	N82-28442 *	#	US-PATENT-APPL-SN-236052	c 14	N72-25428 *	#
US-PATENT-APPL-SN-199765	c 33	N81-12330 *	#	US-PATENT-APPL-SN-219681	c 24	N82-29362 *	#	US-PATENT-APPL-SN-236281	c 09	N73-20232 *	#
US-PATENT-APPL-SN-199766	c 36	N84-28065 *	#	US-PATENT-APPL-SN-219681	c 54	N84-11758 *					

US-PATENT-APPL-SN-238421	c 28	N71-29153 *	US-PATENT-APPL-SN-253774	c 25	N70-36946 *	US-PATENT-APPL-SN-271951	c 35	N74-15092 *
US-PATENT-APPL-SN-238785	c 44	N83-14693 *	US-PATENT-APPL-SN-254173	c 35	N75-13213 *	US-PATENT-APPL-SN-272152	c 27	N83-29368 *
US-PATENT-APPL-SN-238786	c 37	N83-28078 *	US-PATENT-APPL-SN-254177	c 10	N73-26230 *	US-PATENT-APPL-SN-272233	c 44	N81-27615 *
US-PATENT-APPL-SN-238790	c 44	N82-29708 *	US-PATENT-APPL-SN-254323	c 35	N78-15434 *	US-PATENT-APPL-SN-272234	c 25	N83-13188 *
US-PATENT-APPL-SN-238791	c 71	N84-14873 *	US-PATENT-APPL-SN-254575	c 25	N83-10126 *	US-PATENT-APPL-SN-272408	c 33	N84-14422 *
US-PATENT-APPL-SN-238826	c 28	N77-10213 *	US-PATENT-APPL-SN-254688	c 52	N83-27577 *	US-PATENT-APPL-SN-272407	c 52	N83-21785 *
US-PATENT-APPL-SN-238887	c 37	N81-22360 *	US-PATENT-APPL-SN-254847	c 15	N71-22874 *	US-PATENT-APPL-SN-272637	c 71	N83-36846 *
US-PATENT-APPL-SN-238888	c 37	N84-28082 *	US-PATENT-APPL-SN-254887	c 08	N72-21197 *	US-PATENT-APPL-SN-273222	c 33	N74-27683 *
US-PATENT-APPL-SN-239573	c 33	N74-10223 *	US-PATENT-APPL-SN-254888	c 08	N72-25206 *	US-PATENT-APPL-SN-273240	c 35	N74-16135 *
US-PATENT-APPL-SN-239574	c 09	N73-32107 *	US-PATENT-APPL-SN-255132	c 14	N71-15598 *	US-PATENT-APPL-SN-273400	c 15	N72-20442 *
US-PATENT-APPL-SN-239575	c 09	N74-19528 *	US-PATENT-APPL-SN-255637	c 52	N74-26626 *	US-PATENT-APPL-SN-273519	c 35	N75-25122 *
US-PATENT-APPL-SN-239576	c 33	N74-14935 *	US-PATENT-APPL-SN-256484	c 06	N70-34946 *	US-PATENT-APPL-SN-273534	c 09	N70-38712 *
US-PATENT-APPL-SN-239577	c 35	N74-13132 *	US-PATENT-APPL-SN-256493	c 20	N77-17143 *	US-PATENT-APPL-SN-274065	c 18	N71-28963 *
US-PATENT-APPL-SN-239803	c 70	N74-13436 *	US-PATENT-APPL-SN-257346	c 15	N70-36901 *	US-PATENT-APPL-SN-274348	c 80	N78-18800 *
US-PATENT-APPL-SN-240760	c 15	N71-16075 *	US-PATENT-APPL-SN-258152	c 35	N74-15090 *	US-PATENT-APPL-SN-274380	c 32	N74-20809 *
US-PATENT-APPL-SN-241061	c 08	N72-27151 *	US-PATENT-APPL-SN-258171	c 34	N74-27744 *	US-PATENT-APPL-SN-274705	c 44	N83-21503 *
US-PATENT-APPL-SN-241061	c 06	N73-33076 *	US-PATENT-APPL-SN-258331	c 03	N73-31988 *	US-PATENT-APPL-SN-274708	c 44	N83-21504 *
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US-PATENT-APPL-SN-241154	c 04	N84-27713 *	US-PATENT-APPL-SN-258831	c 14	N70-40203 *	US-PATENT-APPL-SN-275118	c 35	N74-18088 *
US-PATENT-APPL-SN-241155	c 27	N84-14324 *	US-PATENT-APPL-SN-258932	c 05	N70-36493 *	US-PATENT-APPL-SN-275909	c 33	N85-21491 *
US-PATENT-APPL-SN-24154	c 15	N70-35679 *	US-PATENT-APPL-SN-259058	c 27	N82-28455 *	US-PATENT-APPL-SN-276076	c 72	N84-16959 *
US-PATENT-APPL-SN-24154	c 15	N72-17450 *	US-PATENT-APPL-SN-259208	c 44	N85-30474 *	US-PATENT-APPL-SN-276598	c 74	N81-19896 *
US-PATENT-APPL-SN-24155	c 14	N73-26432 *	US-PATENT-APPL-SN-259209	c 01	N83-35992 *	US-PATENT-APPL-SN-276748	c 33	N83-34168 *
US-PATENT-APPL-SN-241614	c 10	N73-27171 *	US-PATENT-APPL-SN-259210	c 32	N83-27085 *	US-PATENT-APPL-SN-276749	c 74	N84-23247 *
US-PATENT-APPL-SN-241615	c 09	N73-32111 *	US-PATENT-APPL-SN-259211	c 44	N84-14583 *	US-PATENT-APPL-SN-277404	c 05	N70-39922 *
US-PATENT-APPL-SN-242027	c 52	N74-12778 *	US-PATENT-APPL-SN-259212	c 35	N84-22931 *	US-PATENT-APPL-SN-277436	c 37	N74-25968 *
US-PATENT-APPL-SN-242028	c 21	N73-30641 *	US-PATENT-APPL-SN-259487	c 33	N70-36847 *	US-PATENT-APPL-SN-277833	c 03	N70-41580 *
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US-PATENT-APPL-SN-242662	c 74	N74-15095 *	US-PATENT-APPL-SN-260093	c 25	N74-26948 *	US-PATENT-APPL-SN-277961	c 33	N70-36617 *
US-PATENT-APPL-SN-242790	c 06	N83-33882 *	US-PATENT-APPL-SN-260241	c 74	N74-21304 *	US-PATENT-APPL-SN-278790	c 15	N70-34664 *
US-PATENT-APPL-SN-242795	c 18	N83-20996 *	US-PATENT-APPL-SN-261183	c 09	N74-30597 *	US-PATENT-APPL-SN-2792	c 14	N70-33386 *
US-PATENT-APPL-SN-242795	c 37	N84-22957 *	US-PATENT-APPL-SN-261912	c 14	N70-34818 *	US-PATENT-APPL-SN-279646	c 08	N71-21042 *
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US-PATENT-APPL-SN-242797	c 74	N85-22139 *	US-PATENT-APPL-SN-261918	c 28	N70-41447 *	US-PATENT-APPL-SN-280031	c 26	N73-26752 *
US-PATENT-APPL-SN-243374	c 15	N77-10112 *	US-PATENT-APPL-SN-262430	c 35	N74-18323 *	US-PATENT-APPL-SN-280032	c 35	N74-15093 *
US-PATENT-APPL-SN-243682	c 74	N83-19596 *	US-PATENT-APPL-SN-262596	c 14	N71-28958 *	US-PATENT-APPL-SN-280151	c 27	N83-36220 *
US-PATENT-APPL-SN-243683	c 33	N81-22280 *	US-PATENT-APPL-SN-262596	c 62	N76-31946 *	US-PATENT-APPL-SN-280152	c 54	N86-22112 *
US-PATENT-APPL-SN-243683	c 33	N83-28319 *	US-PATENT-APPL-SN-263230	c 33	N74-20860 *	US-PATENT-APPL-SN-280153	c 51	N83-17045 *
US-PATENT-APPL-SN-243683	c 33	N84-14424 *	US-PATENT-APPL-SN-263498	c 34	N74-27859 *	US-PATENT-APPL-SN-280154	c 33	N83-10345 *
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US-PATENT-APPL-SN-243684	c 37	N84-12492 *	US-PATENT-APPL-SN-263735	c 02	N70-34858 *	US-PATENT-APPL-SN-280305	c 34	N74-23039 *
US-PATENT-APPL-SN-243685	c 07	N81-27096 *	US-PATENT-APPL-SN-263815	c 09	N74-17955 *	US-PATENT-APPL-SN-280362	c 14	N71-28935 *
US-PATENT-APPL-SN-244158	c 32	N74-20863 *	US-PATENT-APPL-SN-263828	c 34	N83-19015 *	US-PATENT-APPL-SN-280390	c 37	N74-15128 *
US-PATENT-APPL-SN-244440	c 21	N73-19630 *	US-PATENT-APPL-SN-263829	c 05	N84-12154 *	US-PATENT-APPL-SN-280580	c 12	N71-21089 *
US-PATENT-APPL-SN-244440	c 14	N73-32320 *	US-PATENT-APPL-SN-263830	c 44	N83-28573 *	US-PATENT-APPL-SN-280776	c 14	N70-40273 *
US-PATENT-APPL-SN-244519	c 37	N74-18125 *	US-PATENT-APPL-SN-263957	c 52	N83-25346 *	US-PATENT-APPL-SN-280777	c 08	N70-41961 *
US-PATENT-APPL-SN-244523	c 31	N73-30829 *	US-PATENT-APPL-SN-264268	c 31	N78-17238 *	US-PATENT-APPL-SN-281069	c 14	N70-35394 *
US-PATENT-APPL-SN-244566	c 74	N74-20008 *	US-PATENT-APPL-SN-264378	c 24	N83-10117 *	US-PATENT-APPL-SN-28175	c 21	N70-33279 *
US-PATENT-APPL-SN-245063	c 33	N74-11049 *	US-PATENT-APPL-SN-264378	c 70	N84-28565 *	US-PATENT-APPL-SN-281875	c 25	N74-18551 *
US-PATENT-APPL-SN-245279	c 25	N74-30502 *	US-PATENT-APPL-SN-264380	c 44	N83-14692 *	US-PATENT-APPL-SN-281876	c 52	N74-20726 *
US-PATENT-APPL-SN-245571	c 07	N84-22560 *	US-PATENT-APPL-SN-264381	c 52	N84-28388 *	US-PATENT-APPL-SN-281877	c 35	N74-15146 *
US-PATENT-APPL-SN-245941	c 33	N71-17897 *	US-PATENT-APPL-SN-264728	c 30	N70-40016 *	US-PATENT-APPL-SN-282129	c 25	N75-12086 *
US-PATENT-APPL-SN-246056	c 38	N74-15395 *	US-PATENT-APPL-SN-264729	c 33	N70-34540 *	US-PATENT-APPL-SN-282191	c 35	N83-29651 *
US-PATENT-APPL-SN-246294	c 27	N82-29454 *	US-PATENT-APPL-SN-264731	c 09	N70-41655 *	US-PATENT-APPL-SN-282192	c 74	N83-21949 *
US-PATENT-APPL-SN-246295	c 27	N82-29452 *	US-PATENT-APPL-SN-264735	c 28	N70-33265 *	US-PATENT-APPL-SN-282298	c 33	N85-29144 *
US-PATENT-APPL-SN-246772	c 44	N83-10494 *	US-PATENT-APPL-SN-264736	c 28	N70-36802 *	US-PATENT-APPL-SN-28235	c 10	N72-17171 *
US-PATENT-APPL-SN-246773	c 35	N83-29650 *	US-PATENT-APPL-SN-26573	c 31	N72-22874 *	US-PATENT-APPL-SN-282817	c 15	N70-40156 *
US-PATENT-APPL-SN-246774	c 34	N83-31993 *	US-PATENT-APPL-SN-266107	c 11	N71-15925 *	US-PATENT-APPL-SN-282818	c 14	N71-14996 *
US-PATENT-APPL-SN-246777	c 45	N83-25217 *	US-PATENT-APPL-SN-266253	c 04	N84-22546 *	US-PATENT-APPL-SN-283502	c 37	N74-21060 *
US-PATENT-APPL-SN-246778	c 36	N83-35350 *	US-PATENT-APPL-SN-266254	c 24	N83-13172 *	US-PATENT-APPL-SN-284245	c 33	N74-17928 *
US-PATENT-APPL-SN-247055	c 37	N74-11300 *	US-PATENT-APPL-SN-266255	c 44	N83-27344 *	US-PATENT-APPL-SN-284265	c 14	N70-34799 *
US-PATENT-APPL-SN-247090	c 37	N74-18128 *	US-PATENT-APPL-SN-266256	c 24	N83-13171 *	US-PATENT-APPL-SN-284286	c 15	N71-16077 *
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US-PATENT-APPL-SN-247419	c 14	N70-36907 *	US-PATENT-APPL-SN-266688	c 37	N83-36483 *	US-PATENT-APPL-SN-284287	c 32	N84-27951 *
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US-PATENT-APPL-SN-247434	c 25	N76-27383 *	US-PATENT-APPL-SN-266822	c 32	N74-10132 *	US-PATENT-APPL-SN-284290	c 33	N83-34191 *
US-PATENT-APPL-SN-247481	c 05	N73-26071 *	US-PATENT-APPL-SN-266832	c 33	N74-10195 *	US-PATENT-APPL-SN-284314	c 33	N84-16454 *
US-PATENT-APPL-SN-248469	c 14	N73-32318 *	US-PATENT-APPL-SN-266866	c 33	N73-32818 *	US-PATENT-APPL-SN-285705	c 37	N74-21056 *
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US-PATENT-APPL-SN-251009	c 33	N84-16452 *	US-PATENT-APPL-SN-269212	c 07	N71-10775 *	US-PATENT-APPL-SN-289050	c 20	N74-32919 *
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US-PATENT-APPL-SN-251752	c 24	N74-30001 *	US-PATENT-APPL-SN-270763	c 36	N84-14509 *	US-PATENT-APPL-SN-290867	c 28	N70-39931 *
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US-PATENT-AP								

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US-PATENT-APPL-SN-292382	c 27	N74-17283 *	US-PATENT-APPL-SN-311234	c 35	N74-23040 *	US-PATENT-APPL-SN-330209	c 15	N70-41646 *
US-PATENT-APPL-SN-292477	c 15	N73-12495 *	US-PATENT-APPL-SN-311387	c 23	N71-30027 *	US-PATENT-APPL-SN-330210	c 14	N71-21090 *
US-PATENT-APPL-SN-292596	c 10	N71-29135 *	US-PATENT-APPL-SN-312269	c 28	N71-14043 *	US-PATENT-APPL-SN-331323	c 07	N71-16088 *
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US-PATENT-APPL-SN-293417	c 37	N82-26673 *	US-PATENT-APPL-SN-314570	c 10	N71-28960 *	US-PATENT-APPL-SN-333353	c 74	N83-36898 *
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US-PATENT-APPL-SN-294737	c 73	N77-18891 *	US-PATENT-APPL-SN-315069	c 33	N74-20862 *	US-PATENT-APPL-SN-334672	c 14	N70-41330 *
US-PATENT-APPL-SN-294738	c 73	N78-28913 *	US-PATENT-APPL-SN-315070	c 60	N76-23850 *	US-PATENT-APPL-SN-334678	c 11	N71-10777 *
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US-PATENT-APPL-SN-296137	c 74	N84-28590 *	US-PATENT-APPL-SN-3151	c 05	N72-27102 *	US-PATENT-APPL-SN-335201	c 33	N74-17927 *
US-PATENT-APPL-SN-296622	c 44	N76-31666 *	US-PATENT-APPL-SN-315278	c 51	N83-28849 *	US-PATENT-APPL-SN-33535	c 06	N72-17093 *
US-PATENT-APPL-SN-296879	c 26	N71-18064 *	US-PATENT-APPL-SN-315583	c 35	N84-33769 *	US-PATENT-APPL-SN-335441	c 14	N71-23268 *
US-PATENT-APPL-SN-297127	c 33	N74-27055 *	US-PATENT-APPL-SN-315584	c 23	N84-18255 *	US-PATENT-APPL-SN-336103	c 16	N71-15550 *
US-PATENT-APPL-SN-297128	c 32	N74-26654 *	US-PATENT-APPL-SN-315587	c 25	N83-31743 *	US-PATENT-APPL-SN-336319	c 44	N74-33739 *
US-PATENT-APPL-SN-297436	c 33	N79-11314 *	US-PATENT-APPL-SN-315588	c 05	N84-22551 *	US-PATENT-APPL-SN-336320	c 15	N71-15966 *
US-PATENT-APPL-SN-297486	c 35	N83-24828 *	US-PATENT-APPL-SN-316477	c 18	N71-10772 *	US-PATENT-APPL-SN-336607	c 10	N71-15910 *
US-PATENT-APPL-SN-297488	c 37	N84-16561 *	US-PATENT-APPL-SN-316618	c 07	N74-15453 *	US-PATENT-APPL-SN-336608	c 32	N71-17645 *
US-PATENT-APPL-SN-297524	c 33	N84-14424 *	US-PATENT-APPL-SN-31702	c 16	N73-16536 *	US-PATENT-APPL-SN-337487	c 33	N74-26977 *
US-PATENT-APPL-SN-297524	c 33	N84-22886 *	US-PATENT-APPL-SN-31703	c 09	N72-21244 *	US-PATENT-APPL-SN-337816	c 35	N75-15931 *
US-PATENT-APPL-SN-298156	c 37	N75-13261 *	US-PATENT-APPL-SN-317310	c 36	N77-25502 *	US-PATENT-APPL-SN-338386	c 15	N84-16231 *
US-PATENT-APPL-SN-298156	c 26	N75-19408 *	US-PATENT-APPL-SN-317389	c 18	N70-41583 *	US-PATENT-APPL-SN-338484	c 32	N74-20811 *
US-PATENT-APPL-SN-298157	c 33	N74-21850 *	US-PATENT-APPL-SN-317391	c 15	N71-15968 *	US-PATENT-APPL-SN-339040	c 31	N70-41373 *
US-PATENT-APPL-SN-298799	c 14	N71-15962 *	US-PATENT-APPL-SN-317567	c 36	N75-15029 *	US-PATENT-APPL-SN-339086	c 07	N74-27490 *
US-PATENT-APPL-SN-298800	c 14	N70-34705 *	US-PATENT-APPL-SN-317658	c 36	N84-16542 *	US-PATENT-APPL-SN-339821	c 17	N70-33288 *
US-PATENT-APPL-SN-299042	c 15	N71-15918 *	US-PATENT-APPL-SN-317977	c 25	N83-36118 *	US-PATENT-APPL-SN-339825	c 28	N71-15660 *
US-PATENT-APPL-SN-29917	c 15	N73-13465 *	US-PATENT-APPL-SN-318151	c 75	N74-30156 *	US-PATENT-APPL-SN-340113	c 16	N70-41578 *
US-PATENT-APPL-SN-29917	c 26	N74-10521 *	US-PATENT-APPL-SN-318152	c 52	N74-20728 *	US-PATENT-APPL-SN-340791	c 35	N74-26945 *
US-PATENT-APPL-SN-29917	c 37	N74-13179 *	US-PATENT-APPL-SN-318357	c 35	N74-20119 *	US-PATENT-APPL-SN-340862	c 33	N77-26387 *
US-PATENT-APPL-SN-29979	c 09	N75-15662 *	US-PATENT-APPL-SN-318358	c 27	N74-27037 *	US-PATENT-APPL-SN-340863	c 25	N76-27383 *
US-PATENT-APPL-SN-300113	c 33	N70-33344 *	US-PATENT-APPL-SN-318443	c 03	N70-34667 *	US-PATENT-APPL-SN-340864	c 31	N74-21059 *
US-PATENT-APPL-SN-300712	c 15	N70-35407 *	US-PATENT-APPL-SN-318848	c 35	N77-14408 *	US-PATENT-APPL-SN-340871	c 44	N74-19870 *
US-PATENT-APPL-SN-300957	c 33	N71-29053 *	US-PATENT-APPL-SN-31885	c 10	N72-17172 *	US-PATENT-APPL-SN-341406	c 71	N83-35781 *
US-PATENT-APPL-SN-301039	c 37	N74-27903 *	US-PATENT-APPL-SN-319150	c 33	N75-19519 *	US-PATENT-APPL-SN-341467	c 15	N70-39924 *
US-PATENT-APPL-SN-301075	c 25	N83-29324 *	US-PATENT-APPL-SN-319410	c 37	N74-20063 *	US-PATENT-APPL-SN-341621	c 54	N74-20725 *
US-PATENT-APPL-SN-301077	c 33	N84-14421 *	US-PATENT-APPL-SN-319892	c 07	N71-10609 *	US-PATENT-APPL-SN-341662	c 08	N74-10842 *
US-PATENT-APPL-SN-301078	c 08	N85-19985 *	US-PATENT-APPL-SN-319893	c 14	N70-41647 *	US-PATENT-APPL-SN-3417	c 15	N72-22490 *
US-PATENT-APPL-SN-301417	c 71	N74-21014 *	US-PATENT-APPL-SN-319994	c 03	N71-11053 *	US-PATENT-APPL-SN-3418	c 15	N72-20446 *
US-PATENT-APPL-SN-301418	c 52	N76-29894 *	US-PATENT-APPL-SN-319905	c 14	N71-10781 *	US-PATENT-APPL-SN-342572	c 02	N71-16087 *
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US-PATENT-APPL-SN-301683	c 07	N71-15907 *	US-PATENT-APPL-SN-320595	c 26	N70-40015 *	US-PATENT-APPL-SN-342828	c 74	N85-29749 *
US-PATENT-APPL-SN-302681	c 37	N75-12326 *	US-PATENT-APPL-SN-320621	c 27	N83-34040 *	US-PATENT-APPL-SN-342857	c 72	N84-28575 *
US-PATENT-APPL-SN-302749	c 14	N70-40201 *	US-PATENT-APPL-SN-321179	c 27	N74-21156 *	US-PATENT-APPL-SN-342858	c 27	N82-26460 *
US-PATENT-APPL-SN-302913	c 76	N79-16678 *	US-PATENT-APPL-SN-321180	c 05	N76-29217 *	US-PATENT-APPL-SN-342871	c 27	N84-33589 *
US-PATENT-APPL-SN-303670	c 37	N82-11469 *	US-PATENT-APPL-SN-321656	c 14	N70-41807 *	US-PATENT-APPL-SN-343308	c 19	N74-29410 *
US-PATENT-APPL-SN-303671	c 31	N83-31896 *	US-PATENT-APPL-SN-322312	c 25	N84-22709 *	US-PATENT-APPL-SN-343425	c 11	N70-35383 *
US-PATENT-APPL-SN-303672	c 71	N83-32516 *	US-PATENT-APPL-SN-322314	c 35	N84-12443 *	US-PATENT-APPL-SN-343426	c 07	N71-20814 *
US-PATENT-APPL-SN-304430	c 52	N74-27864 *	US-PATENT-APPL-SN-322316	c 31	N83-19947 *	US-PATENT-APPL-SN-343607	c 18	N74-27397 *
US-PATENT-APPL-SN-304696	c 32	N70-41579 *	US-PATENT-APPL-SN-322317	c 46	N85-21846 *	US-PATENT-APPL-SN-343760	c 07	N71-28979 *
US-PATENT-APPL-SN-304705	c 32	N74-20810 *	US-PATENT-APPL-SN-322321	c 37	N85-21651 *	US-PATENT-APPL-SN-344410	c 07	N74-33218 *
US-PATENT-APPL-SN-304749	c 11	N71-16028 *	US-PATENT-APPL-SN-322545	c 14	N71-10774 *	US-PATENT-APPL-SN-344793	c 03	N71-11058 *
US-PATENT-APPL-SN-304918	c 37	N74-21063 *	US-PATENT-APPL-SN-322585	c 37	N75-27376 *	US-PATENT-APPL-SN-345372	c 33	N74-22814 *
US-PATENT-APPL-SN-305012	c 35	N75-15094 *	US-PATENT-APPL-SN-322997	c 37	N75-15992 *	US-PATENT-APPL-SN-346356	c 14	N70-41676 *
US-PATENT-APPL-SN-305013	c 14	N73-13435 *	US-PATENT-APPL-SN-322997	c 24	N79-25143 *	US-PATENT-APPL-SN-346361	c 37	N74-21064 *
US-PATENT-APPL-SN-305020	c 21	N70-34295 *	US-PATENT-APPL-SN-322998	c 35	N74-32877 *	US-PATENT-APPL-SN-346372	c 35	N75-12270 *
US-PATENT-APPL-SN-305638	c 34	N74-23066 *	US-PATENT-APPL-SN-323182	c 03	N70-41864 *	US-PATENT-APPL-SN-346483	c 37	N74-32921 *
US-PATENT-APPL-SN-305639	c 37	N74-27904 *	US-PATENT-APPL-SN-324029	c 32	N74-27612 *	US-PATENT-APPL-SN-346483	c 37	N76-15461 *
US-PATENT-APPL-SN-306652	c 33	N74-32712 *	US-PATENT-APPL-SN-32496	c 15	N70-37925 *	US-PATENT-APPL-SN-347101	c 09	N70-41675 *
US-PATENT-APPL-SN-307269	c 24	N71-10560 *	US-PATENT-APPL-SN-325082	c 35	N83-29652 *	US-PATENT-APPL-SN-347626	c 15	N70-40204 *
US-PATENT-APPL-SN-307270	c 10	N71-16030 *	US-PATENT-APPL-SN-325083	c 33	N84-16456 *	US-PATENT-APPL-SN-347952	c 37	N75-13265 *
US-PATENT-APPL-SN-307271	c 09	N71-22999 *	US-PATENT-APPL-SN-325784	c 24	N76-14204 *	US-PATENT-APPL-SN-347953	c 05	N75-24716 *
US-PATENT-APPL-SN-307714	c 03	N76-32140 *	US-PATENT-APPL-SN-325885	c 35	N82-25484 *	US-PATENT-APPL-SN-347960	c 03	N70-39930 *
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US-PATENT-APPL-SN-307728	c 34	N74-27861 *	US-PATENT-APPL-SN-325931	c 37	N82-26674 *	US-PATENT-APPL-SN-348600	c 28	N71-29154 *
US-PATENT-APPL-SN-307729	c 31	N74-27900 *	US-PATENT-APPL-SN-325932	c 33	N84-16455 *	US-PATENT-APPL-SN-348787	c 33	N75-19521 *
US-PATENT-APPL-SN-308007	c 44	N83-34448 *	US-PATENT-APPL-SN-325933	c 76	N83-20789 *	US-PATENT-APPL-SN-349778	c 09	N70-40234 *
US-PATENT-APPL-SN-308009	c 33	N83-36355 *	US-PATENT-APPL-SN-326198	c 35	N75-12272 *	US-PATENT-APPL-SN-349781	c 31	N71-15647 *
US-PATENT-APPL-SN-308201	c 27	N83-28240 *	US-PATENT-APPL-SN-326298	c 14	N71-22765 *	US-PATENT-APPL-SN-349782	c 09	N71-16086 *
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US-PATENT-APPL-SN-308203	c 34	N84-12406 *	US-PATENT-APPL-SN-326326	c 35	N74-32879 *	US-PATENT-APPL-SN-350249	c 36	N75-15028 *
US-PATENT-APPL-SN-308204	c 31	N82-11312 *	US-PATENT-APPL-SN-326327	c 44	N74-27519 *	US-PATENT-APPL-SN-350250	c 27	N75-27160 *
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US-PATENT-APPL-SN-309293	c 25	N83-13187 *	US-PATENT-APPL-SN-327565	c 02	N70-36825 *	US-PATENT-APPL-SN-350474	c 35	N84-22928 *
US-PATENT-APPL-SN-309354	c 11	N71-15926 *	US-PATENT-APPL-SN-327921	c 54	N75-13531 *	US-PATENT-APPL-SN-350475	c 35	N84-28017 *
US-PATENT-APPL-SN-310034	c 32	N74-30524 *	US-PATENT-APPL-SN-327969	c 35	N75-13213 *	US-PATENT-APPL-SN-350476	c 26	N84-22734 *
US-PATENT-APPL-SN-3101								



US-PATENT-APPL-SN-351929	c 33	N75-14957 *	#	US-PATENT-APPL-SN-367268	c 05	N75-25914 *	#	US-PATENT-APPL-SN-384010	c 10	N71-28859 *	#
US-PATENT-APPL-SN-351950	c 33	N75-27249 *	#	US-PATENT-APPL-SN-367293	c 36	N75-19855 *	#	US-PATENT-APPL-SN-384547	c 36	N85-29264 *	#
US-PATENT-APPL-SN-352381	c 20	N75-18310 *	#	US-PATENT-APPL-SN-367294	c 76	N75-12810 *	#	US-PATENT-APPL-SN-384773	c 15	N78-14158 *	#
US-PATENT-APPL-SN-352382	c 37	N78-14481 *	#	US-PATENT-APPL-SN-367606	c 75	N75-13825 *	#	US-PATENT-APPL-SN-384811	c 15	N71-10809 *	#
US-PATENT-APPL-SN-352383	c 60	N75-13539 *	#	US-PATENT-APPL-SN-367606	c 75	N78-17951 *	#	US-PATENT-APPL-SN-385013	c 35	N75-19613 *	#
US-PATENT-APPL-SN-352383	c 35	N75-16783 *	#	US-PATENT-APPL-SN-368123	c 09	N71-10618 *	#	US-PATENT-APPL-SN-385059	c 33	N77-21315 *	#
US-PATENT-APPL-SN-352400	c 26	N71-10607 *	#	US-PATENT-APPL-SN-368187	c 54	N84-11758 *	#	US-PATENT-APPL-SN-385220	c 36	N85-30305 *	#
US-PATENT-APPL-SN-352821	c 44	N84-28205 *	#	US-PATENT-APPL-SN-368188	c 33	N84-33663 *	#	US-PATENT-APPL-SN-385520	c 14	N71-23037 *	#
US-PATENT-APPL-SN-352827	c 35	N84-28015 *	#	US-PATENT-APPL-SN-368189	c 18	N84-22605 *	#	US-PATENT-APPL-SN-385522	c 34	N75-33342 *	#
US-PATENT-APPL-SN-352827	c 35	N85-21598 *	#	US-PATENT-APPL-SN-368619	c 23	N72-22673 *	#	US-PATENT-APPL-SN-385526	c 12	N71-16031 *	#
US-PATENT-APPL-SN-352831	c 35	N84-16523 *	#	US-PATENT-APPL-SN-369226	c 28	N72-23810 *	#	US-PATENT-APPL-SN-385527	c 31	N71-17729 *	#
US-PATENT-APPL-SN-353162	c 33	N75-26243 *	#	US-PATENT-APPL-SN-369334	c 21	N71-22880 *	#	US-PATENT-APPL-SN-385530	c 09	N71-10798 *	#
US-PATENT-APPL-SN-353632	c 15	N71-13789 *	#	US-PATENT-APPL-SN-369336	c 09	N71-10659 *	#	US-PATENT-APPL-SN-386487	c 14	N70-40233 *	#
US-PATENT-APPL-SN-353634	c 15	N70-41829 *	#	US-PATENT-APPL-SN-369337	c 15	N70-41811 *	#	US-PATENT-APPL-SN-386789	c 35	N75-12271 *	#
US-PATENT-APPL-SN-353637	c 02	N70-34160 *	#	US-PATENT-APPL-SN-369338	c 08	N71-28925 *	#	US-PATENT-APPL-SN-386790	c 09	N75-12968 *	#
US-PATENT-APPL-SN-353644	c 07	N71-23098 *	#	US-PATENT-APPL-SN-369640	c 32	N70-41370 *	#	US-PATENT-APPL-SN-386793	c 35	N75-25124 *	#
US-PATENT-APPL-SN-353645	c 15	N71-15922 *	#	US-PATENT-APPL-SN-3696	c 10	N72-20224 *	#	US-PATENT-APPL-SN-386800	c 15	N71-21404 *	#
US-PATENT-APPL-SN-354060	c 74	N76-19935 *	#	US-PATENT-APPL-SN-370134	c 30	N70-40353 *	#	US-PATENT-APPL-SN-387094	c 37	N77-19457 *	#
US-PATENT-APPL-SN-354126	c 37	N82-22496 *	#	US-PATENT-APPL-SN-370135	c 11	N70-41677 *	#	US-PATENT-APPL-SN-387095	c 37	N75-33395 *	#
US-PATENT-APPL-SN-354182	c 10	N71-20841 *	#	US-PATENT-APPL-SN-370255	c 33	N75-18477 *	#	US-PATENT-APPL-SN-387266	c 35	N75-27328 *	#
US-PATENT-APPL-SN-354406	c 52	N76-14757 *	#	US-PATENT-APPL-SN-370271	c 32	N75-24981 *	#	US-PATENT-APPL-SN-387332	c 15	N70-33226 *	#
US-PATENT-APPL-SN-354407	c 33	N74-22865 *	#	US-PATENT-APPL-SN-37050	c 33	N74-26732 *	#	US-PATENT-APPL-SN-387342	c 37	N76-18457 *	#
US-PATENT-APPL-SN-354408	c 35	N75-19614 *	#	US-PATENT-APPL-SN-370582	c 18	N76-14186 *	#	US-PATENT-APPL-SN-387648	c 37	N85-30336 *	#
US-PATENT-APPL-SN-354611	c 25	N74-26947 *	#	US-PATENT-APPL-SN-370872	c 37	N74-32918 *	#	US-PATENT-APPL-SN-387647	c 33	N85-34333 *	#
US-PATENT-APPL-SN-354612	c 35	N75-30504 *	#	US-PATENT-APPL-SN-370989	c 23	N71-29049 *	#	US-PATENT-APPL-SN-387648	c 37	N85-21650 *	#
US-PATENT-APPL-SN-355126	c 17	N71-15644 *	#	US-PATENT-APPL-SN-370999	c 74	N78-15879 *	#	US-PATENT-APPL-SN-387649	c 09	N85-19990 *	#
US-PATENT-APPL-SN-355129	c 14	N70-41957 *	#	US-PATENT-APPL-SN-371322	c 44	N76-14600 *	#	US-PATENT-APPL-SN-387728	c 37	N84-28084 *	#
US-PATENT-APPL-SN-355130	c 15	N70-40354 *	#	US-PATENT-APPL-SN-371351	c 76	N84-35113 *	#	US-PATENT-APPL-SN-388023	c 10	N70-41964 *	#
US-PATENT-APPL-SN-356488	c 08	N71-19544 *	#	US-PATENT-APPL-SN-371352	c 52	N84-11744 *	#	US-PATENT-APPL-SN-388024	c 32	N71-17609 *	#
US-PATENT-APPL-SN-356554	c 24	N75-33181 *	#	US-PATENT-APPL-SN-371353	c 37	N82-26676 *	#	US-PATENT-APPL-SN-38814	c 15	N72-11385 *	#
US-PATENT-APPL-SN-356555	c 37	N75-19685 *	#	US-PATENT-APPL-SN-371856	c 15	N70-42033 *	#	US-PATENT-APPL-SN-38816	c 70	N74-13436 *	#
US-PATENT-APPL-SN-356664	c 31	N75-12161 *	#	US-PATENT-APPL-SN-371957	c 07	N70-41680 *	#	US-PATENT-APPL-SN-38816	c 74	N76-15679 *	#
US-PATENT-APPL-SN-356692	c 15	N70-41371 *	#	US-PATENT-APPL-SN-372148	c 35	N74-26949 *	#	US-PATENT-APPL-SN-388966	c 31	N70-41855 *	#
US-PATENT-APPL-SN-357126	c 35	N74-34857 *	#	US-PATENT-APPL-SN-372149	c 37	N75-15050 *	#	US-PATENT-APPL-SN-388967	c 10	N71-23271 *	#
US-PATENT-APPL-SN-357312	c 27	N76-16229 *	#	US-PATENT-APPL-SN-372279	c 35	N84-28019 *	#	US-PATENT-APPL-SN-389916	c 18	N75-27041 *	#
US-PATENT-APPL-SN-357334	c 03	N71-12258 *	#	US-PATENT-APPL-SN-372438	c 30	N71-17788 *	#	US-PATENT-APPL-SN-389929	c 33	N75-25040 *	#
US-PATENT-APPL-SN-357336	c 03	N71-12259 *	#	US-PATENT-APPL-SN-372648	c 27	N71-16348 *	#	US-PATENT-APPL-SN-390049	c 37	N76-16446 *	#
US-PATENT-APPL-SN-357337	c 15	N71-10782 *	#	US-PATENT-APPL-SN-372727	c 31	N70-36845 *	#	US-PATENT-APPL-SN-390049	c 44	N76-29700 *	#
US-PATENT-APPL-SN-357340	c 23	N71-15673 *	#	US-PATENT-APPL-SN-372730	c 28	N71-28850 *	#	US-PATENT-APPL-SN-390250	c 21	N70-41856 *	#
US-PATENT-APPL-SN-358088	c 35	N84-33767 *	#	US-PATENT-APPL-SN-373587	c 33	N74-32711 *	#	US-PATENT-APPL-SN-390251	c 07	N71-23026 *	#
US-PATENT-APPL-SN-358089	c 71	N84-23233 *	#	US-PATENT-APPL-SN-373588	c 33	N75-19515 *	#	US-PATENT-APPL-SN-390466	c 24	N75-13032 *	#
US-PATENT-APPL-SN-358127	c 05	N71-12335 *	#	US-PATENT-APPL-SN-373591	c 31	N71-15692 *	#	US-PATENT-APPL-SN-390468	c 36	N75-19652 *	#
US-PATENT-APPL-SN-358398	c 36	N84-22944 *	#	US-PATENT-APPL-SN-373770	c 35	N84-34705 *	#	US-PATENT-APPL-SN-391343	c 05	N69-21473 *	#
US-PATENT-APPL-SN-359039	c 32	N74-30523 *	#	US-PATENT-APPL-SN-373771	c 35	N84-22934 *	#	US-PATENT-APPL-SN-39185	c 16	N72-25485 *	#
US-PATENT-APPL-SN-359156	c 14	N75-24794 *	#	US-PATENT-APPL-SN-373772	c 33	N84-22887 *	#	US-PATENT-APPL-SN-392092	c 51	N84-28361 *	#
US-PATENT-APPL-SN-359157	c 35	N74-18090 *	#	US-PATENT-APPL-SN-374421	c 27	N76-24405 *	#	US-PATENT-APPL-SN-392093	c 33	N82-28549 *	#
US-PATENT-APPL-SN-359382	c 32	N85-34327 *	#	US-PATENT-APPL-SN-374422	c 32	N75-24982 *	#	US-PATENT-APPL-SN-392094	c 37	N85-29283 *	#
US-PATENT-APPL-SN-359388	c 44	N83-32177 *	#	US-PATENT-APPL-SN-374423	c 36	N75-31427 *	#	US-PATENT-APPL-SN-392096	c 02	N84-11136 *	#
US-PATENT-APPL-SN-359532	c 15	N71-28959 *	#	US-PATENT-APPL-SN-374424	c 74	N75-12732 *	#	US-PATENT-APPL-SN-392103	c 44	N84-28204 *	#
US-PATENT-APPL-SN-359626	c 35	N84-28018 *	#	US-PATENT-APPL-SN-374441	c 35	N75-19616 *	#	US-PATENT-APPL-SN-392104	c 37	N85-20338 *	#
US-PATENT-APPL-SN-359627	c 35	N82-26631 *	#	US-PATENT-APPL-SN-374583	c 33	N74-29556 *	#	US-PATENT-APPL-SN-392823	c 25	N74-33378 *	#
US-PATENT-APPL-SN-359627	c 35	N85-29214 *	#	US-PATENT-APPL-SN-374810	c 27	N80-32514 *	#	US-PATENT-APPL-SN-392944	c 76	N85-29600 *	#
US-PATENT-APPL-SN-359957	c 07	N74-32418 *	#	US-PATENT-APPL-SN-375401	c 17	N71-16025 *	#	US-PATENT-APPL-SN-392965	c 18	N71-22998 *	#
US-PATENT-APPL-SN-359958	c 37	N74-26976 *	#	US-PATENT-APPL-SN-375405	c 31	N71-15675 *	#	US-PATENT-APPL-SN-392969	c 09	N71-23573 *	#
US-PATENT-APPL-SN-360180	c 17	N71-16026 *	#	US-PATENT-APPL-SN-375620	c 43	N85-21723 *	#	US-PATENT-APPL-SN-392970	c 32	N70-41367 *	#
US-PATENT-APPL-SN-360182	c 31	N70-36654 *	#	US-PATENT-APPL-SN-375674	c 28	N70-41582 *	#	US-PATENT-APPL-SN-392973	c 07	N71-23001 *	#
US-PATENT-APPL-SN-360878	c 03	N71-11051 *	#	US-PATENT-APPL-SN-375680	c 10	N71-28739 *	#	US-PATENT-APPL-SN-392992	c 15	N71-23052 *	#
US-PATENT-APPL-SN-361215	c 27	N84-14323 *	#	US-PATENT-APPL-SN-375682	c 31	N70-41589 *	#	US-PATENT-APPL-SN-39342	c 09	N72-25252 *	#
US-PATENT-APPL-SN-361216	c 35	N84-28016 *	#	US-PATENT-APPL-SN-375684	c 44	N85-21769 *	#	US-PATENT-APPL-SN-39343	c 34	N74-18552 *	#
US-PATENT-APPL-SN-361217	c 71	N85-22104 *	#	US-PATENT-APPL-SN-375784	c 26	N82-26431 *	#	US-PATENT-APPL-SN-39344	c 14	N72-25409 *	#
US-PATENT-APPL-SN-361666	c 33	N75-30428 *	#	US-PATENT-APPL-SN-375784	c 24	N85-21266 *	#	US-PATENT-APPL-SN-393451	c 02	N70-42016 *	#
US-PATENT-APPL-SN-361711	c 24	N82-26387 *	#	US-PATENT-APPL-SN-375784	c 24	N85-35233 *	#	US-PATENT-APPL-SN-393456	c 33	N83-16633 *	#
US-PATENT-APPL-SN-361711	c 24	N84-16262 *	#	US-PATENT-APPL-SN-376306	c 25	N84-12262 *	#	US-PATENT-APPL-SN-393461	c 31	N71-17691 *	#
US-PATENT-APPL-SN-361906	c 33	N74-20861 *	#	US-PATENT-APPL-SN-377146	c 14	N71-23041 *	#	US-PATENT-APPL-SN-393464	c 23	N71-21821 *	#
US-PATENT-APPL-SN-361907	c 35	N74-27865 *	#	US-PATENT-APPL-SN-377777	c 32	N70-42003 *	#	US-PATENT-APPL-SN-393523	c 12	N75-24774 *	#
US-PATENT-APPL-SN-362145	c 32	N75-26194 *	#	US-PATENT-APPL-SN-377780	c 11	N71-10604 *	#	US-PATENT-APPL-SN-393524	c 60	N76-21914 *	#
US-PATENT-APPL-SN-362146	c 33	N75-18479 *	#	US-PATENT-APPL-SN-377784	c 28	N70-41311 *	#	US-PATENT-APPL-SN-393525	c 31	N74-23917 *	#
US-PATENT-APPL-SN-362261	c 14	N73-32325 *	#	US-PATENT-APPL-SN-377891	c 52	N84-34913 *	#	US-PATENT-APPL-SN-393526	c 77	N75-20139 *	#
US-PATENT-APPL-SN-362278	c 37	N78-17385 *	#	US-PATENT-APPL-SN-377892	c 33	N83-24763 *	#	US-PATENT-APPL-SN-393527	c 15	N75-13007 *	#
US-PATENT-APPL-SN-363130	c 25	N81-19244 *	#	US-PATENT-APPL-SN-378080	c 12	N71-24692 *	#	US-PATENT-APPL-SN-393528	c 36	N75-19654 *	#
US-PATENT-APPL-SN-363348	c 05	N70-41581 *	#	US-PATENT-APPL-SN-378126	c 44	N76-18643 *	#	US-PATENT-APPL-SN-393581	c 54	N84-23113 *	#
US-PATENT-APPL-SN-363653	c 07	N70-41331 *	#	US-PATENT-APPL-SN-378127	c 44	N76-18641 *	#	US-PATENT-APPL-SN-393582	c 37	N85-21649 *	#
US-PATENT-APPL-SN-363654	c 07	N70-41372 *	#	US-PATENT-APPL-SN-378533	c 37	N84-11497 *	#	US-PATENT-APPL-SN-393583	c 27	N83-29392 *	#
US-PATENT-APPL-SN-363691	c 20	N76-14190 *	#	US-PATENT-APPL-SN-379019	c 74	N84-23248 *	#	US-PATENT-APPL-SN-393584	c 37	N85-30334 *	#
US-PATENT-APPL-SN-364041	c 76	N85-30923 *	#	US-PATENT-APPL-SN-379049	c 09	N75-12969 *	#	US-PATENT-APPL-SN-393585	c 37	N82-31690 *	#
US-PATENT-APPL-SN-364072	c 70	N84-28565 *	#	US-PATENT-APPL-SN-379072	c 15	N75-13111 *	#	US-PATENT-APPL-SN-393586	c 54	N84-28484 *	#
US-PATENT-APPL-SN-364092	c 76	N83-35888 *	#	US-PATENT-APPL-SN-379417	c 02	N71-16078 *	#	US-PATENT-APPL-SN-393588	c 25	N84-16276 *	#
US-PATENT-APPL-SN-364093	c 37	N83-34323 *	#	US-PATENT-APPL-SN-379601	c 15	N70-41863 *	#	US-PATENT-APPL-SN-394149	c 35	N75-25123 *	#
US-PATENT-APPL-SN-364094	c 37	N84-28083 *	#	US-PATENT-APPL-SN-379602	c 71	N85-30765 *	#	US-PATENT-APPL-SN-394206	c 76	N75-25730 *	#
US-PATENT-APPL-SN-364097	c 71	N82-27086 *	#	US-PATENT-APPL-SN-379768	c 44	N84-23018 *	#	US-PATENT-APPL-SN-394207	c 25	N78-27226 *	#
US-PATENT-APPL-SN-364126	c 36	N84-22943 *	#	US-PATENT-APPL-SN-379771	c 28	N71-10780 *	#	US-PATENT-APPL-SN-394280	c 54	N82-29002 *	#
US-PATENT-APPL-SN-364867	c 09	N71-10673 *	#	US-PATENT-APPL-SN-380046	c 33	N71-28852 *	#	US-PATENT-APPL-SN-394638	c 28	N70-34162 *	#
US-PATENT-APPL-SN-365244	c 37	N78-17386 *	#	US-PATENT-APPL-SN-380060	c 25	N76-29379 *	#	US-PATENT-APPL-SN-394898	c 07	N77-28118 *	#
US-PATENT-APPL-SN-365331	c 07	N72-25174 *	#	US-PATENT-APPL-SN-380630	c 37	N75-2163					



US-PATENT-APPL-SN-397665	c 10	N70-41991 *	#	US-PATENT-APPL-SN-41455	c 02	N70-33255 *	US-PATENT-APPL-SN-432027	c 21	N70-41930 *	#
US-PATENT-APPL-SN-398131	c 05	N70-41297 *	#	US-PATENT-APPL-SN-415486	c 37	N75-19683 *	US-PATENT-APPL-SN-432028	c 15	N71-22723 *	#
US-PATENT-APPL-SN-398132	c 15	N70-41808 *	#	US-PATENT-APPL-SN-415878	c 08	N86-27288 *	US-PATENT-APPL-SN-432030	c 12	N71-20896 *	#
US-PATENT-APPL-SN-398885	c 27	N76-15310 *	#	US-PATENT-APPL-SN-415879	c 37	N85-21652 *	US-PATENT-APPL-SN-432032	c 15	N69-24322 *	#
US-PATENT-APPL-SN-398886	c 07	N75-24736 *	#	US-PATENT-APPL-SN-415880	c 27	N84-27884 *	US-PATENT-APPL-SN-432057	c 33	N84-14423 *	#
US-PATENT-APPL-SN-398901	c 37	N75-25186 *	#	US-PATENT-APPL-SN-415960	c 37	N85-20337 *	US-PATENT-APPL-SN-432433	c 15	N71-22705 *	#
US-PATENT-APPL-SN-399074	c 33	N83-13360 *	#	US-PATENT-APPL-SN-416135	c 32	N75-15854 *	US-PATENT-APPL-SN-433196	c 44	N84-23019 *	#
US-PATENT-APPL-SN-399419	c 21	N71-23289 *	#	US-PATENT-APPL-SN-416938	c 11	N71-10746 *	US-PATENT-APPL-SN-433227	c 15	N72-26371 *	#
US-PATENT-APPL-SN-400467	c 33	N75-30431 *	#	US-PATENT-APPL-SN-416940	c 21	N71-21708 *	US-PATENT-APPL-SN-433598	c 27	N84-22747 *	#
US-PATENT-APPL-SN-400613	c 15	N71-21528 *	#	US-PATENT-APPL-SN-416941	c 31	N70-34159 *	US-PATENT-APPL-SN-433821	c 09	N71-16089 *	#
US-PATENT-APPL-SN-400617	c 31	N71-17629 *	#	US-PATENT-APPL-SN-416943	c 14	N71-23269 *	US-PATENT-APPL-SN-433968	c 33	N75-25041 *	#
US-PATENT-APPL-SN-400857	c 31	N79-21225 *	#	US-PATENT-APPL-SN-416945	c 10	N71-23543 *	US-PATENT-APPL-SN-434084	c 33	N84-27974 *	#
US-PATENT-APPL-SN-401224	c 38	N78-17396 *	#	US-PATENT-APPL-SN-416946	c 28	N71-15563 *	US-PATENT-APPL-SN-434085	c 33	N85-29145 *	#
US-PATENT-APPL-SN-401225	c 38	N78-17395 *	#	US-PATENT-APPL-SN-417253	c 11	N71-23042 *	US-PATENT-APPL-SN-434087	c 27	N86-19457 *	#
US-PATENT-APPL-SN-401282	c 18	N85-29991 *	#	US-PATENT-APPL-SN-418137	c 16	N84-22601 *	US-PATENT-APPL-SN-434143	c 15	N71-15871 *	#
US-PATENT-APPL-SN-401288	c 37	N84-28081 *	#	US-PATENT-APPL-SN-418138	c 16	N84-27784 *	US-PATENT-APPL-SN-434148	c 31	N71-24750 *	#
US-PATENT-APPL-SN-401466	c 09	N75-24758 *	#	US-PATENT-APPL-SN-418139	c 24	N84-27829 *	US-PATENT-APPL-SN-434672	c 34	N84-14461 *	#
US-PATENT-APPL-SN-401919	c 24	N76-24363 *	#	US-PATENT-APPL-SN-418362	c 14	N71-20741 *	US-PATENT-APPL-SN-434674	c 34	N83-35307 *	#
US-PATENT-APPL-SN-401920	c 37	N75-25185 *	#	US-PATENT-APPL-SN-418931	c 05	N70-42000 *	US-PATENT-APPL-SN-435387	c 10	N70-42032 *	#
US-PATENT-APPL-SN-401921	c 24	N76-14203 *	#	US-PATENT-APPL-SN-418933	c 15	N71-23022 *	US-PATENT-APPL-SN-435433	c 14	N71-30026 *	#
US-PATENT-APPL-SN-402205	c 33	N85-30187 *	#	US-PATENT-APPL-SN-419319	c 34	N76-17317 *	US-PATENT-APPL-SN-435511	c 27	N84-27886 *	#
US-PATENT-APPL-SN-402365	c 31	N71-17730 *	#	US-PATENT-APPL-SN-419747	c 17	N76-21250 *	US-PATENT-APPL-SN-435756	c 12	N71-16894 *	#
US-PATENT-APPL-SN-402865	c 33	N74-32660 *	#	US-PATENT-APPL-SN-419748	c 27	N76-14264 *	US-PATENT-APPL-SN-436313	c 54	N77-32721 *	#
US-PATENT-APPL-SN-402867	c 35	N75-33367 *	#	US-PATENT-APPL-SN-419831	c 35	N75-21582 *	US-PATENT-APPL-SN-436315	c 26	N75-19408 *	#
US-PATENT-APPL-SN-402868	c 35	N75-19612 *	#	US-PATENT-APPL-SN-419831	c 35	N77-17426 *	US-PATENT-APPL-SN-436316	c 20	N76-14191 *	#
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US-PATENT-APPL-SN-403154	c 37	N77-22480 *	#	US-PATENT-APPL-SN-420245	c 08	N71-22749 *	US-PATENT-APPL-SN-437556	c 27	N76-16230 *	#
US-PATENT-APPL-SN-403371	c 27	N82-33523 *	#	US-PATENT-APPL-SN-420250	c 15	N71-23051 *	US-PATENT-APPL-SN-437611	c 09	N71-22796 *	#
US-PATENT-APPL-SN-403378	c 26	N84-33555 *	#	US-PATENT-APPL-SN-420424	c 34	N75-26282 *	US-PATENT-APPL-SN-437912	c 33	N85-29142 *	#
US-PATENT-APPL-SN-403694	c 54	N75-12616 *	#	US-PATENT-APPL-SN-420466	c 14	N71-23092 *	US-PATENT-APPL-SN-437913	c 33	N83-12334 *	#
US-PATENT-APPL-SN-403695	c 35	N77-20399 *	#	US-PATENT-APPL-SN-420813	c 36	N75-32441 *	US-PATENT-APPL-SN-437917	c 60	N85-33701 *	#
US-PATENT-APPL-SN-403847	c 31	N83-35176 *	#	US-PATENT-APPL-SN-42088	c 34	N78-17336 *	US-PATENT-APPL-SN-438135	c 09	N71-23027 *	#
US-PATENT-APPL-SN-403848	c 33	N85-21493 *	#	US-PATENT-APPL-SN-421702	c 44	N75-32581 *	US-PATENT-APPL-SN-438147	c 75	N76-14931 *	#
US-PATENT-APPL-SN-403849	c 35	N82-33681 *	#	US-PATENT-APPL-SN-421702	c 44	N76-23675 *	US-PATENT-APPL-SN-438446	c 74	N86-20126 *	#
US-PATENT-APPL-SN-403959	c 14	N70-41994 *	#	US-PATENT-APPL-SN-422092	c 14	N71-22989 *	US-PATENT-APPL-SN-438797	c 18	N71-10500 *	#
US-PATENT-APPL-SN-403960	c 14	N70-41366 *	#	US-PATENT-APPL-SN-422095	c 07	N71-10676 *	US-PATENT-APPL-SN-438883	c 14	N73-30532 *	#
US-PATENT-APPL-SN-404212	c 14	N73-32324 *	#	US-PATENT-APPL-SN-422096	c 03	N71-29044 *	US-PATENT-APPL-SN-438884	c 15	N72-25457 *	#
US-PATENT-APPL-SN-404809	c 27	N84-27885 *	#	US-PATENT-APPL-SN-422097	c 11	N71-21481 *	US-PATENT-APPL-SN-439489	c 09	N70-41717 *	#
US-PATENT-APPL-SN-404809	c 25	N85-28982 *	#	US-PATENT-APPL-SN-422098	c 15	N71-22797 *	US-PATENT-APPL-SN-439490	c 23	N69-24332 *	#
US-PATENT-APPL-SN-405341	c 37	N76-15460 *	#	US-PATENT-APPL-SN-422099	c 14	N71-22964 *	US-PATENT-APPL-SN-440033	c 27	N70-41897 *	#
US-PATENT-APPL-SN-405342	c 35	N75-19615 *	#	US-PATENT-APPL-SN-422864	c 05	N69-21925 *	US-PATENT-APPL-SN-440036	c 09	N71-23097 *	#
US-PATENT-APPL-SN-405346	c 37	N75-30562 *	#	US-PATENT-APPL-SN-422865	c 31	N70-41631 *	US-PATENT-APPL-SN-440039	c 09	N71-22888 *	#
US-PATENT-APPL-SN-405629	c 09	N71-10677 *	#	US-PATENT-APPL-SN-422867	c 15	N70-40062 *	US-PATENT-APPL-SN-440656	c 27	N85-21348 *	#
US-PATENT-APPL-SN-405630	c 14	N71-10616 *	#	US-PATENT-APPL-SN-422868	c 15	N71-10617 *	US-PATENT-APPL-SN-440916	c 33	N75-27252 *	#
US-PATENT-APPL-SN-405632	c 21	N71-15582 *	#	US-PATENT-APPL-SN-422869	c 14	N71-10779 *	US-PATENT-APPL-SN-440917	c 37	N76-18459 *	#
US-PATENT-APPL-SN-406097	c 14	N71-21088 *	#	US-PATENT-APPL-SN-423016	c 36	N85-21631 *	US-PATENT-APPL-SN-441279	c 35	N75-29382 *	#
US-PATENT-APPL-SN-406296	c 25	N79-10163 *	#	US-PATENT-APPL-SN-423412	c 08	N71-22897 *	US-PATENT-APPL-SN-441897	c 35	N84-33768 *	#
US-PATENT-APPL-SN-406715	c 35	N75-15014 *	#	US-PATENT-APPL-SN-424013	c 34	N76-27517 *	US-PATENT-APPL-SN-441899	c 27	N84-14322 *	#
US-PATENT-APPL-SN-406820	c 74	N83-13982 *	#	US-PATENT-APPL-SN-424038	c 24	N75-30260 *	US-PATENT-APPL-SN-441936	c 14	N69-39975 *	#
US-PATENT-APPL-SN-406820	c 74	N86-32266 *	#	US-PATENT-APPL-SN-424153	c 15	N71-21234 *	US-PATENT-APPL-SN-442558	c 15	N71-10799 *	#
US-PATENT-APPL-SN-407240	c 27	N83-34041 *	#	US-PATENT-APPL-SN-424156	c 02	N71-23007 *	US-PATENT-APPL-SN-442835	c 26	N71-29156 *	#
US-PATENT-APPL-SN-407240	c 27	N85-20124 *	#	US-PATENT-APPL-SN-424157	c 28	N70-41275 *	US-PATENT-APPL-SN-444087	c 02	N71-11041 *	#
US-PATENT-APPL-SN-407323	c 32	N75-21485 *	#	US-PATENT-APPL-SN-425096	c 05	N71-23080 *	US-PATENT-APPL-SN-444124	c 52	N84-23095 *	#
US-PATENT-APPL-SN-407595	c 28	N70-41992 *	#	US-PATENT-APPL-SN-425201	c 04	N86-19304 *	US-PATENT-APPL-SN-444125	c 20	N83-17588 *	#
US-PATENT-APPL-SN-407599	c 14	N71-21091 *	#	US-PATENT-APPL-SN-425202	c 74	N85-34629 *	US-PATENT-APPL-SN-444149	c 47	N84-28292 *	#
US-PATENT-APPL-SN-407603	c 05	N71-11199 *	#	US-PATENT-APPL-SN-425203	c 35	N84-22930 *	US-PATENT-APPL-SN-444150	c 35	N84-22933 *	#
US-PATENT-APPL-SN-408435	c 15	N71-28937 *	#	US-PATENT-APPL-SN-425204	c 32	N85-29117 *	US-PATENT-APPL-SN-445178	c 37	N76-15461 *	#
US-PATENT-APPL-SN-408438	c 07	N71-22750 *	#	US-PATENT-APPL-SN-425205	c 35	N85-21595 *	US-PATENT-APPL-SN-445292	c 11	N71-23030 *	#
US-PATENT-APPL-SN-408442	c 10	N71-23662 *	#	US-PATENT-APPL-SN-425363	c 15	N71-10658 *	US-PATENT-APPL-SN-445398	c 74	N78-15880 *	#
US-PATENT-APPL-SN-408575	c 35	N83-32026 *	#	US-PATENT-APPL-SN-425365	c 09	N71-20658 *	US-PATENT-APPL-SN-445807	c 14	N71-22996 *	#
US-PATENT-APPL-SN-409126	c 18	N71-21068 *	#	US-PATENT-APPL-SN-425366	c 33	N71-15623 *	US-PATENT-APPL-SN-446071	c 25	N82-29370 *	#
US-PATENT-APPL-SN-409678	c 09	N84-27749 *	#	US-PATENT-APPL-SN-425365	c 32	N71-21045 *	US-PATENT-APPL-SN-446131	c 14	N71-22992 *	#
US-PATENT-APPL-SN-409679	c 33	N82-33634 *	#	US-PATENT-APPL-SN-425972	c 03	N71-23006 *	US-PATENT-APPL-SN-446560	c 12	N76-15189 *	#
US-PATENT-APPL-SN-409679	c 33	N84-22884 *	#	US-PATENT-APPL-SN-426155	c 33	N75-15074 *	US-PATENT-APPL-SN-446562	c 36	N76-14447 *	#
US-PATENT-APPL-SN-409680	c 35	N85-20294 *	#	US-PATENT-APPL-SN-426405	c 25	N75-26043 *	US-PATENT-APPL-SN-446564	c 35	N75-26334 *	#
US-PATENT-APPL-SN-409990	c 35	N75-27330 *	#	US-PATENT-APPL-SN-426455	c 28	N71-15661 *	US-PATENT-APPL-SN-446567	c 34	N76-27515 *	#
US-PATENT-APPL-SN-409991	c 33	N75-13139 *	#	US-PATENT-APPL-SN-426702	c 15	N70-42034 *	US-PATENT-APPL-SN-446568	c 37	N76-23570 *	#
US-PATENT-APPL-SN-410325	c 18	N71-23088 *	#	US-PATENT-APPL-SN-427395	c 54	N75-27760 *	US-PATENT-APPL-SN-446569	c 77	N75-20140 *	#
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US-PATENT-APPL-SN-410331	c 02	N70-41589 *	#	US-PATENT-APPL-SN-428444	c 44	N76-18642 *	US-PATENT-APPL-SN-447927	c 11	N71-10776 *	#
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US-PATENT-APPL-SN-411572	c 35	N75-15932 *	#	US-PATENT-APPL-SN-428882	c 31	N70-41948 *	US-PATENT-APPL-SN-447930	c 14	N69-39896 *	#
US-PATENT-APPL-SN-411944	c 15	N70-41629 *	#	US-PATENT-APPL-SN-428887	c 33	N71-29051 *	US-PATENT-APPL-SN-447933	c 03	N69-21337 *	#
US-PATENT-APPL-SN-411945	c 18	N71-23047 *	#	US-PATENT-APPL-SN-428890	c 02	N70-41630 *	US-PATENT-APPL-SN-448320	c 91	N76-30131 *	#
US-PATENT-APPL-SN-411949	c 27	N71-15635 *	#	US-PATENT-APPL-SN-428892	c 34	N77-18382 *	US-PATENT-APPL-SN-448321	c 27	N78-32261 *	#
US-PATENT-APPL-SN-412039	c 06	N84-34443 *	#	US-PATENT-APPL-SN-428893	c 45	N75-27585 *	US-PATENT-APPL-SN-448323	c 18	N76-17185 *	#
US-PATENT-APPL-SN-412079	c 37	N75-13266 *	#	US-PATENT-APPL-SN-428894	c 32	N75-21486 *	US-PATENT-APPL-SN-448325	c 33	N75-26244 *	#
US-PATENT-APPL-SN-412080	c 36	N75-19653 *	#	US-PATENT-APPL-SN-428894	c 32	N76-16249 *	US-PATENT-APPL-SN-448365	c 10	N71-26414 *	#
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US-PATENT-APPL-SN-41347	c 09	N72-25256 *	#	US-PATENT-APPL-SN-430226	c 18	N71-23658 *	US-PATENT-APPL-SN-449901	c 28	N70-41967 *	#
US-PATENT-APPL-SN-41348	c 09	N72-23173 *	#	US-PATENT-APPL-SN-430496	c 26	N75-29236 *	US-PATENT-APPL-SN-449902	c 14	N70-41681 *	#
US-PATENT-APPL-SN-413661	c 15	N71-23024 *	#	US-PATENT-APPL-SN-430748	c 76	N79-21910 *	US-PATENT-APPL-SN-450166	c 33	N84-27975 *	#
US-PATENT-APPL-SN-413662	c 09	N70-41929 *	#	US-PATENT-APPL-SN-430776	c					

US-PATENT-APPL-SN-452465	0 25	N83-17628 *	US-PATENT-APPL-SN-470114	0 25	N83-24572 *	US-PATENT-APPL-SN-487343	0 03	N66-39890 *
US-PATENT-APPL-SN-452466	0 03	N84-33394 *	US-PATENT-APPL-SN-470429	0 33	N76-16392 *	US-PATENT-APPL-SN-487344	0 15	N66-21472 *
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US-PATENT-APPL-SN-452767	0 05	N75-25915 *	US-PATENT-APPL-SN-47061	0 26	N72-25660 *	US-PATENT-APPL-SN-487652	0 23	N75-15568 *
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US-PATENT-APPL-SN-452944	0 18	N71-24183 *	US-PATENT-APPL-SN-47063	0 06	N71-28808 *	US-PATENT-APPL-SN-487940	0 10	N71-26434 *
US-PATENT-APPL-SN-452945	0 18	N69-39979 *	US-PATENT-APPL-SN-471154	0 09	N73-28064 *	US-PATENT-APPL-SN-488381	0 14	N73-32321 *
US-PATENT-APPL-SN-453116	0 32	N76-14321 *	US-PATENT-APPL-SN-47120	0 31	N70-33242 *	US-PATENT-APPL-SN-488616	0 07	N76-18117 *
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US-PATENT-APPL-SN-453227	0 31	N71-10582 *	US-PATENT-APPL-SN-47122	0 14	N70-34813 *	US-PATENT-APPL-SN-489008	0 23	N75-30256 *
US-PATENT-APPL-SN-453229	0 17	N71-23828 *	US-PATENT-APPL-SN-47123	0 15	N70-34817 *	US-PATENT-APPL-SN-489009	0 33	N76-19339 *
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US-PATENT-APPL-SN-453232	0 15	N71-21311 *	US-PATENT-APPL-SN-472072	0 07	N71-20701 *	US-PATENT-APPL-SN-489675	0 06	N65-29047 *
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US-PATENT-APPL-SN-455352	0 33	N71-20634 *	US-PATENT-APPL-SN-473535	0 31	N71-16637 *	US-PATENT-APPL-SN-491418	0 35	N75-33368 *
US-PATENT-APPL-SN-455477	0 06	N71-19687 *	US-PATENT-APPL-SN-473537	0 08	N71-15908 *	US-PATENT-APPL-SN-491417	0 37	N76-19437 *
US-PATENT-APPL-SN-45549	0 27	N76-18228 *	US-PATENT-APPL-SN-473537	0 35	N83-21316 *	US-PATENT-APPL-SN-491418	0 31	N76-31365 *
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US-PATENT-APPL-SN-455581	0 09	N71-23021 *	US-PATENT-APPL-SN-47440	0 07	N73-20174 *	US-PATENT-APPL-SN-492282	0 27	N85-20124 *
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US-PATENT-APPL-SN-457298	0 09	N71-23545 *	US-PATENT-APPL-SN-474744	0 35	N76-14431 *	US-PATENT-APPL-SN-493359	0 20	N76-21275 *
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US-PATENT-APPL-SN-458484	0 44	N76-14595 *	US-PATENT-APPL-SN-475338	0 35	N76-15431 *	US-PATENT-APPL-SN-493943	0 15	N71-21529 *
US-PATENT-APPL-SN-459138	0 14	N71-10773 *	US-PATENT-APPL-SN-476244	0 33	N84-22885 *	US-PATENT-APPL-SN-494280	0 28	N71-23081 *
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US-PATENT-APPL-SN-459842	0 35	N85-30281 *	US-PATENT-APPL-SN-476763	0 09	N69-21313 *	US-PATENT-APPL-SN-494287	0 03	N71-22974 *
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US-PATENT-APPL-SN-460511	0 33	N83-21238 *	US-PATENT-APPL-SN-478129	0 25	N86-27431 *	US-PATENT-APPL-SN-495021	0 44	N76-13526 *
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US-PATENT-APPL-SN-460876	0 09	N69-21470 *	US-PATENT-APPL-SN-478131	0 26	N83-24639 *	US-PATENT-APPL-SN-495380	0 37	N85-29285 *
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US-PATENT-APPL-SN-461073	0 33	N75-26246 *	US-PATENT-APPL-SN-478800	0 37	N76-19436 *	US-PATENT-APPL-SN-495381	0 24	N85-21267 *
US-PATENT-APPL-SN-461477	0 37	N75-19686 *	US-PATENT-APPL-SN-478802	0 06	N74-27872 *	US-PATENT-APPL-SN-496205	0 14	N71-22965 *
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US-PATENT-APPL-SN-462762	0 12	N69-21466 *	US-PATENT-APPL-SN-482105	0 27	N76-23426 *	US-PATENT-APPL-SN-500679	0 32	N76-18295 *
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US-PATENT-APPL-SN-464720	0 32	N76-16249 *	US-PATENT-APPL-SN-482963	0 74	N76-18913 *	US-PATENT-APPL-SN-501080	0 60	N84-28491 *
US-PATENT-APPL-SN-464721	0 37	N75-26372 *	US-PATENT-APPL-SN-482967	0 34	N76-18364 *	US-PATENT-APPL-SN-502026	0 07	N72-17109 *
US-PATENT-APPL-SN-464722	0 35	N76-22509 *	US-PATENT-APPL-SN-483301	0 36	N77-26477 *	US-PATENT-APPL-SN-502027	0 07	N72-20141 *
US-PATENT-APPL-SN-464723	0 33	N75-30429 *	US-PATENT-APPL-SN-483617	0 27	N76-21190 *	US-PATENT-APPL-SN-502028	0 14	N73-13418 *
US-PATENT-APPL-SN-464878	0 10	N71-22986 *	US-PATENT-APPL-SN-483650	0 37	N76-14460 *	US-PATENT-APPL-SN-502124	0 35	N76-16393 *
US-PATENT-APPL-SN-464879	0 14	N71-21072 *	US-PATENT-APPL-SN-483651	0 35	N76-15435 *	US-PATENT-APPL-SN-502135	0 35	N76-15433 *
US-PATENT-APPL-SN-464880	0 33	N71-21586 *	US-PATENT-APPL-SN-483652	0 33	N75-30430 *	US-PATENT-APPL-SN-502136	0 35	N75-27331 *
US-PATENT-APPL-SN-464885	0 15	N71-22997 *	US-PATENT-APPL-SN-483657	0 44	N76-14801 *	US-PATENT-APPL-SN-502137	0 37	N76-21554 *
US-PATENT-APPL-SN-465363	0 52	N84-28389 *	US-PATENT-APPL-SN-483658	0 35	N76-18400 *	US-PATENT-APPL-SN-502138	0 43	N77-10584 *
US-PATENT-APPL-SN-465364	0 44	N85-20530 *	US-PATENT-APPL-SN-483658	0 04	N71-23185 *	US-PATENT-APPL-SN-502693	0 15	N71-20739 *
US-PATENT-APPL-SN-465365	0 43	N86-19711 *	US-PATENT-APPL-SN-483686	0 09	N71-22968 *	US-PATENT-APPL-SN-502701	0 08	N71-23295 *
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US-PATENT-APPL-SN-465367	0 27	N84-22748 *	US-PATENT-APPL-SN-484156	0 11	N71-21475 *	US-PATENT-APPL-SN-502710	0 15	N71-23048 *
US-PATENT-APPL-SN-465369	0 76	N83-21993 *	US-PATENT-APPL-SN-484206	0 35	N75-30502 *	US-PATENT-APPL-SN-502729	0 31	N70-41871 *
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US-PATENT-APPL-SN-465370	0 52	N83-29991 *	US-PATENT-APPL-SN-484485	0 01	N71-23497 *	US-PATENT-APPL-SN-502740	0 14	N69-27485 *
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US-PATENT-APPL-SN-557861	c 03	N71-24605 *	US-PATENT-APPL-SN-57252	c 14	N72-25414 *	US-PATENT-APPL-SN-5586330	c 05	N71-12344 *
US-PATENT-APPL-SN-557868	c 14	N70-41682 *	US-PATENT-APPL-SN-57253	c 18	N72-25541 *	US-PATENT-APPL-SN-5587749	c 60	N84-25306 *
US-PATENT-APPL-SN-557871	c 10	N71-21483 *	US-PATENT-APPL-SN-572990	c 37	N78-16369 *	US-PATENT-APPL-SN-5587784	c 18	N86-24729 *
US-PATENT-APPL-SN-55808	c 06	N72-31140 *	US-PATENT-APPL-SN-572991	c 51	N77-22794 *	US-PATENT-APPL-SN-5588036	c 18	N84-22612 *
US-PATENT-APPL-SN-558600	c 74	N77-10899 *	US-PATENT-APPL-SN-573029	c 07	N79-14097 *	US-PATENT-APPL-SN-5588039	c 18	N84-32424 *
US-PATENT-APPL-SN-559055	c 33	N71-29048 *	US-PATENT-APPL-SN-573162	c 37	N86-27630 *	US-PATENT-APPL-SN-5588164	c 31	N85-29882 *
US-PATENT-APPL-SN-559349	c 33	N71-24145 *	US-PATENT-APPL-SN-573432	c 14	N71-23790 *	US-PATENT-APPL-SN-5588835	c 21	N71-15642 *
US-PATENT-APPL-SN-559350	c 33	N71-28892 *	US-PATENT-APPL-SN-57399	c 03	N72-20034 *	US-PATENT-APPL-SN-5588851	c 31	N71-24813 *
US-PATENT-APPL-SN-559351	c 14	N69-39785 *	US-PATENT-APPL-SN-574208	c 37	N76-28590 *	US-PATENT-APPL-SN-5588871	c 03	N71-23354 *
US-PATENT-APPL-SN-559845	c 35	N78-29551 *	US-PATENT-APPL-SN-574218	c 52	N76-28895 *	US-PATENT-APPL-SN-5588721	c 27	N78-33228 *
US-PATENT-APPL-SN-559846	c 34	N79-13289 *	US-PATENT-APPL-SN-574219	c 35	N76-31490 *	US-PATENT-APPL-SN-5589118	c 32	N77-23242 *
US-PATENT-APPL-SN-559846	c 34	N80-24573 *	US-PATENT-APPL-SN-574220	c 15	N69-21480 *	US-PATENT-APPL-SN-5589172	c 27	N79-14214 *
US-PATENT-APPL-SN-559847	c 34	N79-13288 *	US-PATENT-APPL-SN-574282	c 15	N69-21380 *	US-PATENT-APPL-SN-5589173	c 32	N77-12240 *
US-PATENT-APPL-SN-559988	c 71	N85-29693 *	US-PATENT-APPL-SN-574282	c 15	N71-23025 *	US-PATENT-APPL-SN-5589233	c 33	N77-14335 *
US-PATENT-APPL-SN-560035	c 24	N85-30027 *	US-PATENT-APPL-SN-574283	c 14	N69-24257 *	US-PATENT-APPL-SN-5590141	c 03	N69-24267 *
US-PATENT-APPL-SN-560891	c 73	N78-19920 *	US-PATENT-APPL-SN-574284	c 08	N71-18763 *	US-PATENT-APPL-SN-5590144	c 15	N71-15806 *
US-PATENT-APPL-SN-560967	c 15	N69-21922 *	US-PATENT-APPL-SN-574290	c 14	N71-20439 *	US-PATENT-APPL-SN-5590145	c 07	N69-39980 *
US-PATENT-APPL-SN-560968	c 10	N71-24883 *	US-PATENT-APPL-SN-575291	c 33	N71-29151 *	US-PATENT-APPL-SN-5590146	c 09	N69-21926 *
US-PATENT-APPL-SN-560969	c 14	N71-15622 *	US-PATENT-APPL-SN-575475	c 05	N69-23182 *	US-PATENT-APPL-SN-5590147	c 15	N71-21489 *
US-PATENT-APPL-SN-561020	c 44	N76-23875 *	US-PATENT-APPL-SN-575930	c 08	N71-23230 *	US-PATENT-APPL-SN-5590158	c 05	N71-24147 *
US-PATENT-APPL-SN-561223	c 14	N71-20427 *	US-PATENT-APPL-SN-576182	c 33	N71-24276 *	US-PATENT-APPL-SN-5590159	c 09	N69-24324 *
US-PATENT-APPL-SN-561369	c 35	N84-33766 *	US-PATENT-APPL-SN-576183	c 09	N71-23525 *	US-PATENT-APPL-SN-5590182	c 37	N78-29588 *
US-PATENT-APPL-SN-561429	c 27	N85-21351 *	US-PATENT-APPL-SN-576195	c 14	N71-21079 *	US-PATENT-APPL-SN-5590183	c 74	N78-13555 *
US-PATENT-APPL-SN-561431	c 27	N85-21350 *	US-PATENT-APPL-SN-576308	c 07	N85-35184 *	US-PATENT-APPL-SN-5590821	c 71	N86-21276 *
US-PATENT-APPL-SN-561432	c 20	N86-28368 *	US-PATENT-APPL-SN-576488	c 44	N76-28635 *	US-PATENT-APPL-SN-5590823	c 35	N85-34375 *
US-PATENT-APPL-SN-561433	c 35	N86-20752 *	US-PATENT-APPL-SN-576521	c 09	N71-20864 *	US-PATENT-APPL-SN-5590925	c 26	N84-20670 *
US-PATENT-APPL-SN-561434	c 25	N85-30039 *	US-PATENT-APPL-SN-576774	c 60	N77-19780 *	US-PATENT-APPL-SN-5590925	c 26	N86-32550 *
US-PATENT-APPL-SN-561435	c 27	N85-21352 *	US-PATENT-APPL-SN-576792	c 14	N71-26136 *	US-PATENT-APPL-SN-5590975	c 44	N78-31525 *
US-PATENT-APPL-SN-561702	c 27	N84-16340 *	US-PATENT-APPL-SN-576797	c 09	N69-24318 *	US-PATENT-APPL-SN-5591000	c 15	N71-24044 *
US-PATENT-APPL-SN-561764	c 32	N77-10392 *	US-PATENT-APPL-SN-577114	c 15	N69-24320 *	US-PATENT-APPL-SN-5591004	c 07	N71-11266 *
US-PATENT-APPL-SN-561956	c 35	N77-17426 *	US-PATENT-APPL-SN-577115	c 15	N71-17647 *	US-PATENT-APPL-SN-5591007	c 16	N69-27491 *
US-PATENT-APPL-SN-562443	c 09	N69-39734 *	US-PATENT-APPL-SN-577545	c 08	N71-18693 *	US-PATENT-APPL-SN-5591014	c 28	N71-24736 *
US-PATENT-APPL-SN-562444	c 14	N71-22995 *	US-PATENT-APPL-SN-577548	c 31	N71-23008 *	US-PATENT-APPL-SN-5591089	c 24	N85-21267 *
US-PATENT-APPL-SN-562445	c 14	N71-23797 *	US-PATENT-APPL-SN-577548	c 09	N69-27422 *	US-PATENT-APPL-SN-5591568	c 74	N78-31998 *
US-PATENT-APPL-SN-562499	c 32	N77-31350 *	US-PATENT-APPL-SN-577548	c 14	N72-28438 *	US-PATENT-APPL-SN-5591589	c 37	N77-12402 *
US-PATENT-APPL-SN-562558	c 31	N79-21227 *	US-PATENT-APPL-SN-577549	c 15	N71-22721 *	US-PATENT-APPL-SN-5591930	c 03	N69-21330 *
US-PATENT-APPL-SN-562933	c 10	N71-24799 *	US-PATENT-APPL-SN-577775	c 14	N71-17574 *	US-PATENT-APPL-SN-5592159	c 07	N78-27232 *
US-PATENT-APPL-SN-562934	c 09	N69-21488 *	US-PATENT-APPL-SN-577778	c 03	N71-11050 *	US-PATENT-APPL-SN-5592680	c 15	N71-22877 *
US-PATENT-APPL-SN-562992	c 27	N78-32261 *	US-PATENT-APPL-SN-578240	c 34	N77-18382 *	US-PATENT-APPL-SN-5592694	c 05	N71-12342 *
US-PATENT-APPL-SN-563049	c 17	N76-29347 *	US-PATENT-APPL-SN-578241	c 52	N78-29896 *	US-PATENT-APPL-SN-5593142	c 37	N77-17484 *
US-PATENT-APPL-SN-563050	c 37	N76-31524 *	US-PATENT-APPL-SN-578387	c 06	N84-20522 *	US-PATENT-APPL-SN-5593593	c 06	N71-11239 *
US-PATENT-APPL-SN-563283	c 35	N76-18401 *	US-PATENT-APPL-SN-578398	c 06	N86-27280 *	US-PATENT-APPL-SN-5593594	c 06	N71-11236 *
US-PATENT-APPL-SN-563644	c 15	N71-18813 *	US-PATENT-APPL-SN-578390	c 44	N85-30475 *	US-PATENT-APPL-SN-5593595	c 06	N71-24740 *
US-PATENT-APPL-SN-563646	c 05	N71-23096 *	US-PATENT-APPL-SN-578397	c 20	N79-21124 *	US-PATENT-APPL-SN-5593804	c 11	N69-27466 *
US-PATENT-APPL-SN-563648	c 15	N71-17803 *	US-PATENT-APPL-SN-578700	c 43	N82-13485 *	US-PATENT-APPL-SN-5593805	c 08	N71-11242 *
US-PATENT-APPL-SN-563650	c 25	N69-21929 *	US-PATENT-APPL-SN-578916	c 14	N71-23036 *	US-PATENT-APPL-SN-5593806	c 06	N71-11243 *
US-PATENT-APPL-SN-563651	c 28	N71-23293 *	US-PATENT-APPL-SN-578923	c 15	N71-21403 *	US-PATENT-APPL-SN-5593807	c 07	N71-26102 *
US-PATENT-APPL-SN-563890	c 35	N85-34373 *	US-PATENT-APPL-SN-578925	c 23	N71-16355 *	US-PATENT-APPL-SN-5594134	c 74	N86-20125 *
US-PATENT-APPL-SN-564622	c 37	N77-31497 *	US-PATENT-APPL-SN-578926	c 06	N69-39936 *	US-PATENT-APPL-SN-5594584	c 14	N71-25892 *
US-PATENT-APPL-SN-564919	c 09	N71-23316 *	US-PATENT-APPL-SN-578928	c 26	N71-21824 *	US-PATENT-APPL-SN-5594583	c 28	N71-21493 *
US-PATENT-APPL-SN-565162	c 35	N79-14348 *	US-PATENT-APPL-SN-578931	c 23	N71-21822 *	US-PATENT-APPL-SN-5594637	c 15	N71-24046 *
US-PATENT-APPL-SN-565289	c 38	N77-17495 *	US-PATENT-APPL-SN-578932	c 08	N71-12505 *	US-PATENT-APPL-SN-5595197	c 33	N77-10429 *
US-PATENT-APPL-SN-565290	c 17	N76-22245 *	US-PATENT-APPL-SN-579121	c 15	N71-29136 *	US-PATENT-APPL-SN-5595254	c 17	N78-17140 *
US-PATENT-APPL-SN-565481	c 09	N84-16221 *	US-PATENT-APPL-SN-579300	c 20	N79-21123 *	US-PATENT-APPL-SN-5595745	c 37	N77-32501 *
US-PATENT-APPL-SN-565482	c 09	N86-32447 *	US-PATENT-APPL-SN-579375	c 07	N77-14025 *	US-PATENT-APPL-SN-5595747	c 37	N77-32500 *
US-PATENT-APPL-SN-566392	c 23	N84-16259 *	US-PATENT-APPL-SN-579376	c 20	N79-21125 *	US-PATENT-APPL-SN-5596338	c 09	N71-20816 *
US-PATENT-APPL-SN-566397	c 14	N71-23175 *	US-PATENT-APPL-SN-579989	c 34	N77-32413 *	US-PATENT-APPL-SN-5596641	c 07	N77-23106 *
US-PATENT-APPL-SN-566399	c 05	N71-23161 *	US-PATENT-APPL-SN-580365	c 15	N71-23255 *	US-PATENT-APPL-SN-5596641	c 37	N78-10467 *
US-PATENT-APPL-SN-566493	c 44	N76-29701 *	US-PATENT-APPL-SN-580397	c 37	N84-20860 *	US-PATENT-APPL-SN-5596733	c 15	N72-11389 *
US-PATENT-APPL-SN-566494	c 32	N77-30309 *	US-PATENT-APPL-SN-580419	c 34	N85-33433 *	US-PATENT-APPL-SN-5596735	c 32	N71-24285 *
US-PATENT-APPL-SN-566495	c 33	N77-17351 *	US-PATENT-APPL-SN-580573	c 44	N85-34441 *	US-PATENT-APPL-SN-5596787	c 37	N77-19458 *
US-PATENT-APPL-SN-566717	c 14	N71-24233 *	US-PATENT-APPL-SN-580574	c 18	N84-22810 *	US-PATENT-APPL-SN-5596787	c 37	N78-31426 *
US-PATENT-APPL-SN-567686	c 15	N71-22994 *	US-PATENT-APPL-SN-58147	c 28	N70-33356 *	US-PATENT-APPL-SN-5596788	c 33	N76-21390 *
US-PATENT-APPL-SN-567806	c 06	N71-22975 *	US-PATENT-APPL-SN-581514	c 70	N75-26789 *	US-PATENT-APPL-SN-5596905	c 24	N77-19170 *
US-PATENT-APPL-SN-56791	c 10	N72-16172 *	US-PATENT-APPL-SN-581750	c 07	N78-17055 *	US-PATENT-APPL-SN-5596959	c 18	N84-22609 *
US-PATENT-APPL-SN-568067	c 31	N71-22968 *	US-PATENT-APPL-SN-581751	c 37	N78-10468 *	US-PATENT-APPL-SN-5596959	c 18	N86-20489 *
US-PATENT-APPL-SN-568071	c 14	N69-27461 *	US-PATENT-APPL-SN-581843	c 31	N79-21226 *	US-PATENT-APPL-SN-5596960	c 37	N85-33490 *
US-PATENT-APPL-SN-568160	c 10	N71-18724 *	US-PATENT-APPL-SN-582171	c 32	N71-16428 *	US-PATENT-APPL-SN-5597430	c 44	N81-29525 *
US-PATENT-APPL-SN-568346	c 04	N69-27487 *	US-PATENT-APPL-SN-582213	c 32	N74-22096 *	US-PATENT-APPL-SN-5597430	c 44	N82-28780 *
US-PATENT-APPL-SN-568352	c 09	N71-20842 *	US-PATENT-APPL-SN-582218	c 33	N76-27472 *	US-PATENT-APPL-SN-5598118	c 15	N69-27490 *
US-PATENT-APPL-SN-568354	c 14	N71-22752 *	US-PATENT-APPL-SN-582492	c 52	N85-30618 *	US-PATENT-APPL-SN-5598119	c 08	N71-19437 *
US-PATENT-APPL-SN-568355	c 32	N71-23971 *	US-PATENT-APPL-SN-582493	c 24	N84-20649 *	US-PATENT-APPL-SN-5598120	c 08	N71-18602 *
US-PATENT-APPL-SN-568356	c 14	N71-15589 *	US-PATENT-APPL-SN-582494	c 36	N84-25037 *	US-PATENT-APPL-SN-5598504	c 37	N77-14477 *
US-PATENT-APPL-SN-568362	c 03	N69-39983 *	US-PATENT-APPL-SN-582495	c 44	N86-27706 *	US-PATENT-APPL-SN-5598777	c 27	N85-34281 *
US-PATENT-APPL-SN-568364	c 10	N71-26418 *	US-PATENT-APPL-SN-582609	c 10	N71-19467 *	US-PATENT-APPL-SN-559892	c 06	N73-30097 *
US-PATENT-APPL-SN-568541	c 24	N77-28225 *	US-PATENT-APPL-SN-582643	c 35	N85-34374 *	US-PATENT-APPL-SN-559892	c 15	N74-27



US-PATENT-APPL-SN-598967	c 31	N77-10229 *	#	US-PATENT-APPL-SN-616472	c 74	N77-22951 *	#	US-PATENT-APPL-SN-636193	c 74	N78-15880 *	#
US-PATENT-APPL-SN-598968	c 33	N77-17354 *	#	US-PATENT-APPL-SN-616528	c 24	N80-33482 *	#	US-PATENT-APPL-SN-636459	c 44	N84-32913 *	#
US-PATENT-APPL-SN-598969	c 44	N78-17460 *	#	US-PATENT-APPL-SN-617021	c 23	N79-16101 *	#	US-PATENT-APPL-SN-636483	c 20	N84-32425 *	#
US-PATENT-APPL-SN-599284	c 35	N77-14411 *	#	US-PATENT-APPL-SN-617022	c 07	N69-27462 *	#	US-PATENT-APPL-SN-636485	c 37	N85-29284 *	#
US-PATENT-APPL-SN-599556	c 14	N72-27411 *	#	US-PATENT-APPL-SN-617202	c 74	N77-28933 *	#	US-PATENT-APPL-SN-636796	c 35	N78-17358 *	#
US-PATENT-APPL-SN-599666	c 21	N72-25595 *	#	US-PATENT-APPL-SN-617612	c 52	N77-10780 *	#	US-PATENT-APPL-SN-636878	c 14	N71-20442 *	#
US-PATENT-APPL-SN-599668	c 15	N72-27484 *	#	US-PATENT-APPL-SN-617770	c 14	N71-23267 *	#	US-PATENT-APPL-SN-637247	c 35	N77-10493 *	#
US-PATENT-APPL-SN-599669	c 09	N72-25249 *	#	US-PATENT-APPL-SN-617774	c 18	N71-16124 *	#	US-PATENT-APPL-SN-637249	c 38	N78-28563 *	#
US-PATENT-APPL-SN-599975	c 08	N69-21928 *	#	US-PATENT-APPL-SN-617775	c 06	N71-28807 *	#	US-PATENT-APPL-SN-637268	c 47	N77-10753 *	#
US-PATENT-APPL-SN-600266	c 14	N71-20430 *	#	US-PATENT-APPL-SN-617776	c 18	N69-39895 *	#	US-PATENT-APPL-SN-637269	c 52	N77-28717 *	#
US-PATENT-APPL-SN-600682	c 14	N71-20461 *	#	US-PATENT-APPL-SN-617778	c 14	N71-26244 *	#	US-PATENT-APPL-SN-637882	c 15	N71-17650 *	#
US-PATENT-APPL-SN-601130	c 31	N86-21718 *	#	US-PATENT-APPL-SN-617779	c 09	N69-39929 *	#	US-PATENT-APPL-SN-638192	c 10	N71-26415 *	#
US-PATENT-APPL-SN-601228	c 15	N71-17652 *	#	US-PATENT-APPL-SN-617783	c 15	N69-24266 *	#	US-PATENT-APPL-SN-638194	c 33	N71-21507 *	#
US-PATENT-APPL-SN-601229	c 14	N71-26474 *	#	US-PATENT-APPL-SN-617871	c 27	N85-29043 *	#	US-PATENT-APPL-SN-638541	c 33	N86-20671 *	#
US-PATENT-APPL-SN-602049	c 35	N84-25015 *	#	US-PATENT-APPL-SN-617895	c 32	N77-14292 *	#	US-PATENT-APPL-SN-638584	c 33	N86-20670 *	#
US-PATENT-APPL-SN-602049	c 35	N86-32697 *	#	US-PATENT-APPL-SN-618594	c 37	N77-13418 *	#	US-PATENT-APPL-SN-638586	c 32	N84-32620 *	#
US-PATENT-APPL-SN-602050	c 37	N85-34402 *	#	US-PATENT-APPL-SN-618894	c 12	N72-21310 *	#	US-PATENT-APPL-SN-638707	c 14	N69-27466 *	#
US-PATENT-APPL-SN-602617	c 37	N77-23483 *	#	US-PATENT-APPL-SN-618955	c 07	N72-33146 *	#	US-PATENT-APPL-SN-639589	c 28	N70-33372 *	#
US-PATENT-APPL-SN-602618	c 44	N76-31667 *	#	US-PATENT-APPL-SN-618969	c 05	N71-26333 *	#	US-PATENT-APPL-SN-640154	c 09	N71-18600 *	#
US-PATENT-APPL-SN-602766	c 22	N73-32528 *	#	US-PATENT-APPL-SN-619519	c 32	N71-16106 *	#	US-PATENT-APPL-SN-640447	c 15	N71-19486 *	#
US-PATENT-APPL-SN-602828	c 09	N71-13531 *	#	US-PATENT-APPL-SN-619520	c 05	N69-21380 *	#	US-PATENT-APPL-SN-640448	c 08	N71-19420 *	#
US-PATENT-APPL-SN-603373	c 28	N84-29017 *	#	US-PATENT-APPL-SN-619521	c 06	N69-39889 *	#	US-PATENT-APPL-SN-640449	c 09	N71-19516 *	#
US-PATENT-APPL-SN-603374	c 37	N86-19606 *	#	US-PATENT-APPL-SN-619903	c 15	N69-27505 *	#	US-PATENT-APPL-SN-640450	c 15	N71-17694 *	#
US-PATENT-APPL-SN-603396	c 14	N69-23191 *	#	US-PATENT-APPL-SN-619907	c 09	N69-21543 *	#	US-PATENT-APPL-SN-640452	c 09	N71-12513 *	#
US-PATENT-APPL-SN-603397	c 26	N71-23292 *	#	US-PATENT-APPL-SN-619908	c 08	N71-20571 *	#	US-PATENT-APPL-SN-640453	c 23	N71-18099 *	#
US-PATENT-APPL-SN-603397	c 27	N85-29044 *	#	US-PATENT-APPL-SN-619986	c 37	N75-32465 *	#	US-PATENT-APPL-SN-640454	c 06	N71-11238 *	#
US-PATENT-APPL-SN-604337	c 44	N76-29699 *	#	US-PATENT-APPL-SN-620675	c 35	N78-19466 *	#	US-PATENT-APPL-SN-640455	c 10	N71-23099 *	#
US-PATENT-APPL-SN-605090	c 15	N71-19485 *	#	US-PATENT-APPL-SN-621098	c 09	N71-20446 *	#	US-PATENT-APPL-SN-640456	c 03	N71-26726 *	#
US-PATENT-APPL-SN-605091	c 15	N71-26346 *	#	US-PATENT-APPL-SN-621714	c 15	N71-19569 *	#	US-PATENT-APPL-SN-640457	c 03	N71-11052 *	#
US-PATENT-APPL-SN-605092	c 05	N71-23317 *	#	US-PATENT-APPL-SN-621715	c 05	N71-11207 *	#	US-PATENT-APPL-SN-640458	c 15	N71-23811 *	#
US-PATENT-APPL-SN-605093	c 17	N71-24911 *	#	US-PATENT-APPL-SN-621742	c 28	N71-23968 *	#	US-PATENT-APPL-SN-640459	c 10	N71-18723 *	#
US-PATENT-APPL-SN-605094	c 09	N71-24808 *	#	US-PATENT-APPL-SN-623156	c 04	N77-19056 *	#	US-PATENT-APPL-SN-640460	c 14	N69-21541 *	#
US-PATENT-APPL-SN-605095	c 10	N71-19417 *	#	US-PATENT-APPL-SN-623187	c 34	N77-19353 *	#	US-PATENT-APPL-SN-640462	c 15	N71-20443 *	#
US-PATENT-APPL-SN-605096	c 15	N71-24834 *	#	US-PATENT-APPL-SN-623188	c 54	N77-21844 *	#	US-PATENT-APPL-SN-640712	c 24	N85-35233 *	#
US-PATENT-APPL-SN-605097	c 14	N69-21923 *	#	US-PATENT-APPL-SN-623238	c 51	N77-25769 *	#	US-PATENT-APPL-SN-640781	c 03	N69-25146 *	#
US-PATENT-APPL-SN-605098	c 09	N71-26092 *	#	US-PATENT-APPL-SN-623389	c 31	N81-15154 *	#	US-PATENT-APPL-SN-640783	c 09	N71-28000 *	#
US-PATENT-APPL-SN-605099	c 09	N71-23548 *	#	US-PATENT-APPL-SN-623536	c 09	N78-18083 *	#	US-PATENT-APPL-SN-640784	c 15	N69-39935 *	#
US-PATENT-APPL-SN-605100	c 15	N71-21536 *	#	US-PATENT-APPL-SN-625077	c 44	N86-25874 *	#	US-PATENT-APPL-SN-640785	c 09	N69-24333 *	#
US-PATENT-APPL-SN-605102	c 09	N69-39987 *	#	US-PATENT-APPL-SN-625732	c 35	N77-18417 *	#	US-PATENT-APPL-SN-640786	c 15	N71-26895 *	#
US-PATENT-APPL-SN-605103	c 28	N70-37980 *	#	US-PATENT-APPL-SN-625733	c 26	N77-28265 *	#	US-PATENT-APPL-SN-640787	c 28	N71-24321 *	#
US-PATENT-APPL-SN-605361	c 02	N70-38009 *	#	US-PATENT-APPL-SN-625734	c 35	N78-10428 *	#	US-PATENT-APPL-SN-640788	c 15	N69-27502 *	#
US-PATENT-APPL-SN-605518	c 15	N71-23023 *	#	US-PATENT-APPL-SN-625759	c 37	N77-14478 *	#	US-PATENT-APPL-SN-640789	c 15	N69-27504 *	#
US-PATENT-APPL-SN-605564	c 06	N73-30103 *	#	US-PATENT-APPL-SN-625761	c 33	N77-31404 *	#	US-PATENT-APPL-SN-641142	c 23	N86-32525 *	#
US-PATENT-APPL-SN-605594	c 06	N73-30101 *	#	US-PATENT-APPL-SN-626376	c 05	N71-11189 *	#	US-PATENT-APPL-SN-641143	c 27	N85-34280 *	#
US-PATENT-APPL-SN-606027	c 06	N73-30099 *	#	US-PATENT-APPL-SN-626942	c 51	N77-27677 *	#	US-PATENT-APPL-SN-641146	c 76	N84-33211 *	#
US-PATENT-APPL-SN-606036	c 06	N73-30100 *	#	US-PATENT-APPL-SN-627257	c 08	N71-12504 *	#	US-PATENT-APPL-SN-641147	c 27	N85-21364 *	#
US-PATENT-APPL-SN-606426	c 35	N84-25016 *	#	US-PATENT-APPL-SN-627599	c 18	N71-18046 *	#	US-PATENT-APPL-SN-641152	c 23	N86-20499 *	#
US-PATENT-APPL-SN-606426	c 74	N86-29650 *	#	US-PATENT-APPL-SN-628094	c 16	N71-20400 *	#	US-PATENT-APPL-SN-641153	c 27	N85-21362 *	#
US-PATENT-APPL-SN-606431	c 37	N86-25791 *	#	US-PATENT-APPL-SN-628221	c 07	N78-18066 *	#	US-PATENT-APPL-SN-641153	c 27	N86-32568 *	#
US-PATENT-APPL-SN-606432	c 74	N84-25450 *	#	US-PATENT-APPL-SN-628246	c 15	N71-17687 *	#	US-PATENT-APPL-SN-641420	c 03	N71-23449 *	#
US-PATENT-APPL-SN-606462	c 08	N71-24891 *	#	US-PATENT-APPL-SN-628247	c 09	N69-21542 *	#	US-PATENT-APPL-SN-641431	c 30	N71-18090 *	#
US-PATENT-APPL-SN-606463	c 14	N71-24864 *	#	US-PATENT-APPL-SN-628248	c 14	N85-27432 *	#	US-PATENT-APPL-SN-641441	c 08	N71-18751 *	#
US-PATENT-APPL-SN-606464	c 15	N71-18579 *	#	US-PATENT-APPL-SN-628866	c 31	N85-20153 *	#	US-PATENT-APPL-SN-641784	c 37	N77-32499 *	#
US-PATENT-APPL-SN-606891	c 44	N77-14581 *	#	US-PATENT-APPL-SN-629456	c 37	N77-14479 *	#	US-PATENT-APPL-SN-641802	c 34	N77-30399 *	#
US-PATENT-APPL-SN-607461	c 05	N71-12346 *	#	US-PATENT-APPL-SN-629457	c 35	N77-32454 *	#	US-PATENT-APPL-SN-641803	c 35	N78-18391 *	#
US-PATENT-APPL-SN-607484	c 09	N71-26002 *	#	US-PATENT-APPL-SN-629458	c 35	N78-17357 *	#	US-PATENT-APPL-SN-642224	c 17	N70-38490 *	#
US-PATENT-APPL-SN-607608	c 14	N69-27484 *	#	US-PATENT-APPL-SN-629759	c 15	N71-16076 *	#	US-PATENT-APPL-SN-642236	c 17	N70-38198 *	#
US-PATENT-APPL-SN-607969	c 09	N76-23273 *	#	US-PATENT-APPL-SN-630579	c 35	N77-24454 *	#	US-PATENT-APPL-SN-642310	c 44	N86-19721 *	#
US-PATENT-APPL-SN-608247	c 15	N71-20813 *	#	US-PATENT-APPL-SN-630583	c 33	N77-24375 *	#	US-PATENT-APPL-SN-642602	c 54	N84-33021 *	#
US-PATENT-APPL-SN-608482	c 74	N77-20882 *	#	US-PATENT-APPL-SN-631341	c 60	N78-17691 *	#	US-PATENT-APPL-SN-642602	c 54	N86-29507 *	#
US-PATENT-APPL-SN-608483	c 09	N77-19076 *	#	US-PATENT-APPL-SN-631344	c 16	N72-28521 *	#	US-PATENT-APPL-SN-643041	c 44	N78-19599 *	#
US-PATENT-APPL-SN-608741	c 23	N85-28973 *	#	US-PATENT-APPL-SN-631848	c 09	N71-12514 *	#	US-PATENT-APPL-SN-643043	c 35	N78-13400 *	#
US-PATENT-APPL-SN-60876	c 15	N72-27485 *	#	US-PATENT-APPL-SN-631895	c 14	N72-27408 *	#	US-PATENT-APPL-SN-643332	c 15	N71-14932 *	#
US-PATENT-APPL-SN-60881	c 32	N72-25877 *	#	US-PATENT-APPL-SN-632104	c 09	N71-19470 *	#	US-PATENT-APPL-SN-643522	c 16	N86-26352 *	#
US-PATENT-APPL-SN-60882	c 05	N73-32011 *	#	US-PATENT-APPL-SN-632111	c 37	N79-10422 *	#	US-PATENT-APPL-SN-643524	c 27	N85-20128 *	#
US-PATENT-APPL-SN-60883	c 10	N73-13235 *	#	US-PATENT-APPL-SN-632112	c 35	N77-22449 *	#	US-PATENT-APPL-SN-643524	c 27	N86-29039 *	#
US-PATENT-APPL-SN-608844	c 15	N71-23798 *	#	US-PATENT-APPL-SN-632152	c 10	N71-24798 *	#	US-PATENT-APPL-SN-643589	c 27	N85-21360 *	#
US-PATENT-APPL-SN-609050	c 04	N73-27052 *	#	US-PATENT-APPL-SN-632154	c 09	N69-39984 *	#	US-PATENT-APPL-SN-643589	c 27	N86-31727 *	#
US-PATENT-APPL-SN-610723	c 14	N71-23755 *	#	US-PATENT-APPL-SN-632162	c 14	N69-39937 *	#	US-PATENT-APPL-SN-643897	c 73	N78-32848 *	#
US-PATENT-APPL-SN-610724	c 31	N71-28851 *	#	US-PATENT-APPL-SN-632163	c 30	N71-23723 *	#	US-PATENT-APPL-SN-64391	c 31	N72-25842 *	#
US-PATENT-APPL-SN-610728	c 31	N71-22969 *	#	US-PATENT-APPL-SN-632164	c 15	N69-24319 *	#	US-PATENT-APPL-SN-644444	c 09	N71-18721 *	#
US-PATENT-APPL-SN-610801	c 76	N77-32919 *	#	US-PATENT-APPL-SN-632165	c 14	N71-26266 *	#	US-PATENT-APPL-SN-644446	c 14	N71-24693 *	#
US-PATENT-APPL-SN-610802	c 35	N77-20400 *	#	US-PATENT-APPL-SN-633178	c 25	N84-32447 *	#	US-PATENT-APPL-SN-644447	c 14	N71-24234 *	#
US-PATENT-APPL-SN-611414	c 46	N74-23068 *	#	US-PATENT-APPL-SN-633179	c 34	N86-12547 *	#	US-PATENT-APPL-SN-644448	c 17	N69-25147 *	#
US-PATENT-APPL-SN-611414	c 46	N74-23069 *	#	US-PATENT-APPL-SN-633180	c 09	N84-32398 *	#	US-PATENT-APPL-SN-644799	c 17	N71-15468 *	#
US-PATENT-APPL-SN-612265	c 14	N72-22442 *	#	US-PATENT-APPL-SN-633363	c 25	N86-25428 *	#	US-PATENT-APPL-SN-645500	c 74	N77-28932 *	#
US-PATENT-APPL-SN-612568	c 15	N71-28952 *	#	US-PATENT-APPL-SN-633383	c 08	N72-20177 *	#	US-PATENT-APPL-SN-645502	c 24	N79-25143 *	#
US-PATENT-APPL-SN-612740	c 25	N71-20563 *	#	US-PATENT-APPL-SN-633384	c 05	N72-22093 *	#	US-PATENT-APPL-SN-645507	c 26	N77-32280 *	#
US-PATENT-APPL-SN-612899	c 07	N77-18154 *	#	US-PATENT-APPL-SN-633876	c 27	N78-19302 *	#	US-PATENT-APPL-SN-645508	c 44	N77-14580 *	#
US-PATENT-APPL-SN-612964	c 20	N77-10148 *	#	US-PATENT-APPL-SN-633877	c 27	N77-13217 *	#	US-PATENT-APPL-SN-645510	c 32	N77-30308 *	#
US-PATENT-APPL-SN-612965	c 52	N77-14735 *	#	US-PATENT-APPL-SN-634038	c 25	N71-18073 *	#	US-PATENT-APPL-SN-645563	c 31	N71-20396 *	#
US-PATENT-APPL-SN-612966	c 35	N78-12390 *	#	US-PATENT-APPL-SN-634040	c 15	N71-19489 *	#	US-PATENT-APPL-SN-645571	c 35	N77-14407 *	#
US-PATENT-APPL-SN-612967	c 74	N77-18893 *	#	US-PATENT-APPL-SN-634060	c 09	N69-39897 *	#	US-PATENT-APPL-SN-645573	c 24	N71-25555 *	#
US-PATENT-APPL-SN-613004	c 71	N77-26919 *	#	US-PATENT-APPL-SN-634205	c 35	N7					

US-PATENT-APPL-SN-649076	c 08	N71-24890 *	US-PATENT-APPL-SN-666553	c 03	N71-11055 *	US-PATENT-APPL-SN-679987	c 44	N82-24644 *
US-PATENT-APPL-SN-649078	c 07	N71-19493 *	US-PATENT-APPL-SN-666554	c 33	N71-16104 *	US-PATENT-APPL-SN-679996	c 44	N82-24643 *
US-PATENT-APPL-SN-649327	c 33	N85-20249 *	US-PATENT-APPL-SN-666555	c 07	N71-24614 *	US-PATENT-APPL-SN-680015	c 52	N79-14750 *
US-PATENT-APPL-SN-649328	c 27	N86-19456 *	US-PATENT-APPL-SN-666982	c 27	N71-30236 *	US-PATENT-APPL-SN-680048	c 52	N82-24641 *
US-PATENT-APPL-SN-649329	c 05	N84-33400 *	US-PATENT-APPL-SN-667010	c 34	N77-27345 *	US-PATENT-APPL-SN-680067	c 07	N77-27116 *
US-PATENT-APPL-SN-649330	c 27	N86-19458 *	US-PATENT-APPL-SN-667625	c 31	N71-15674 *	US-PATENT-APPL-SN-680023	c 05	N72-33096 *
US-PATENT-APPL-SN-649356	c 09	N71-23189 *	US-PATENT-APPL-SN-667636	c 03	N71-20491 *	US-PATENT-APPL-SN-680024	c 17	N72-22535 *
US-PATENT-APPL-SN-649357	c 08	N71-12500 *	US-PATENT-APPL-SN-667637	c 28	N71-14044 *	US-PATENT-APPL-SN-680038	c 74	N77-26982 *
US-PATENT-APPL-SN-649358	c 07	N71-11267 *	US-PATENT-APPL-SN-667628	c 35	N77-30436 *	US-PATENT-APPL-SN-680039	c 44	N78-10554 *
US-PATENT-APPL-SN-649359	c 15	N71-18701 *	US-PATENT-APPL-SN-667928	c 35	N79-14346 *	US-PATENT-APPL-SN-680057	c 35	N77-27366 *
US-PATENT-APPL-SN-649360	c 23	N71-18365 *	US-PATENT-APPL-SN-667930	c 32	N77-28346 *	US-PATENT-APPL-SN-680058	c 74	N78-18905 *
US-PATENT-APPL-SN-650166	c 09	N71-23191 *	US-PATENT-APPL-SN-668116	c 35	N78-16391 *	US-PATENT-APPL-SN-681000	c 34	N78-25350 *
US-PATENT-APPL-SN-651002	c 08	N78-14108 *	US-PATENT-APPL-SN-668238	c 15	N71-15808 *	US-PATENT-APPL-SN-681001	c 74	N76-22993 *
US-PATENT-APPL-SN-651007	c 74	N78-17865 *	US-PATENT-APPL-SN-668241	c 15	N71-17685 *	US-PATENT-APPL-SN-681017	c 44	N77-32583 *
US-PATENT-APPL-SN-651009	c 26	N78-18182 *	US-PATENT-APPL-SN-668242	c 10	N71-27272 *	US-PATENT-APPL-SN-681041	c 37	N86-27629 *
US-PATENT-APPL-SN-651627	c 26	N72-25679 *	US-PATENT-APPL-SN-668247	c 09	N71-20445 *	US-PATENT-APPL-SN-681096	c 44	N77-32582 *
US-PATENT-APPL-SN-651972	c 27	N74-23125 *	US-PATENT-APPL-SN-668248	c 10	N71-26331 *	US-PATENT-APPL-SN-681692	c 08	N71-12506 *
US-PATENT-APPL-SN-652948	c 52	N77-14736 *	US-PATENT-APPL-SN-668249	c 03	N71-20407 *	US-PATENT-APPL-SN-681693	c 09	N71-18598 *
US-PATENT-APPL-SN-652979	c 45	N82-11634 *	US-PATENT-APPL-SN-668257	c 23	N71-16100 *	US-PATENT-APPL-SN-681842	c 18	N71-15688 *
US-PATENT-APPL-SN-653277	c 31	N71-23912 *	US-PATENT-APPL-SN-668302	c 07	N71-16100 *	US-PATENT-APPL-SN-682416	c 34	N77-24423 *
US-PATENT-APPL-SN-653278	c 14	N69-27503 *	US-PATENT-APPL-SN-668303	c 31	N85-20154 *	US-PATENT-APPL-SN-682435	c 27	N77-32308 *
US-PATENT-APPL-SN-653316	c 25	N77-32255 *	US-PATENT-APPL-SN-668432	c 07	N86-29174 *	US-PATENT-APPL-SN-683073	c 44	N81-29525 *
US-PATENT-APPL-SN-653422	c 35	N77-20401 *	US-PATENT-APPL-SN-668432	c 35	N71-11237 *	US-PATENT-APPL-SN-683073	c 44	N82-28780 *
US-PATENT-APPL-SN-653682	c 39	N78-10493 *	US-PATENT-APPL-SN-668751	c 05	N71-17693 *	US-PATENT-APPL-SN-683101	c 33	N85-20247 *
US-PATENT-APPL-SN-654787	c 07	N77-32148 *	US-PATENT-APPL-SN-668755	c 15	N78-32397 *	US-PATENT-APPL-SN-683110	c 37	N86-28085 *
US-PATENT-APPL-SN-655149	c 07	N77-23106 *	US-PATENT-APPL-SN-668771	c 35	N80-10374 *	US-PATENT-APPL-SN-683111	c 33	N85-20251 *
US-PATENT-APPL-SN-655448	c 18	N70-39897 *	US-PATENT-APPL-SN-668783	c 28	N71-12515 *	US-PATENT-APPL-SN-683465	c 27	N82-29451 *
US-PATENT-APPL-SN-655601	c 32	N86-27513 *	US-PATENT-APPL-SN-668969	c 08	N71-18288 *	US-PATENT-APPL-SN-683507	c 15	N71-15609 *
US-PATENT-APPL-SN-655605	c 52	N85-20639 *	US-PATENT-APPL-SN-668971	c 07	N78-33101 *	US-PATENT-APPL-SN-683606	c 09	N71-24717 *
US-PATENT-APPL-SN-655606	c 32	N85-20226 *	US-PATENT-APPL-SN-669140	c 44	N85-20535 *	US-PATENT-APPL-SN-683612	c 01	N69-39981 *
US-PATENT-APPL-SN-655675	c 17	N71-24142 *	US-PATENT-APPL-SN-669140	c 44	N86-32875 *	US-PATENT-APPL-SN-683613	c 15	N71-15610 *
US-PATENT-APPL-SN-655677	c 08	N71-19432 *	US-PATENT-APPL-SN-669336	c 15	N71-17651 *	US-PATENT-APPL-SN-684045	c 07	N80-26298 *
US-PATENT-APPL-SN-655724	c 15	N71-22706 *	US-PATENT-APPL-SN-669911	c 33	N78-17925 *	US-PATENT-APPL-SN-684083	c 09	N71-24596 *
US-PATENT-APPL-SN-656952	c 09	N71-12519 *	US-PATENT-APPL-SN-669928	c 44	N77-22607 *	US-PATENT-APPL-SN-684171	c 26	N78-18183 *
US-PATENT-APPL-SN-656953	c 14	N71-17585 *	US-PATENT-APPL-SN-670814	c 03	N71-19545 *	US-PATENT-APPL-SN-684178	c 15	N71-23812 *
US-PATENT-APPL-SN-656993	c 09	N71-24843 *	US-PATENT-APPL-SN-670829	c 28	N72-23809 *	US-PATENT-APPL-SN-684190	c 54	N85-20666 *
US-PATENT-APPL-SN-656995	c 21	N71-14132 *	US-PATENT-APPL-SN-672209	c 52	N82-22875 *	US-PATENT-APPL-SN-684190	c 54	N86-28619 *
US-PATENT-APPL-SN-657308	c 35	N85-20298 *	US-PATENT-APPL-SN-672210	c 25	N80-10224 *	US-PATENT-APPL-SN-684192	c 54	N85-21986 *
US-PATENT-APPL-SN-657309	c 31	N86-29055 *	US-PATENT-APPL-SN-672219	c 37	N80-28711 *	US-PATENT-APPL-SN-684192	c 54	N86-28620 *
US-PATENT-APPL-SN-657310	c 35	N85-20299 *	US-PATENT-APPL-SN-672220	c 31	N78-17237 *	US-PATENT-APPL-SN-684193	c 54	N85-21987 *
US-PATENT-APPL-SN-657742	c 18	N71-26100 *	US-PATENT-APPL-SN-672221	c 07	N78-27121 *	US-PATENT-APPL-SN-684193	c 54	N86-28618 *
US-PATENT-APPL-SN-657903	c 07	N83-33884 *	US-PATENT-APPL-SN-672222	c 07	N78-25090 *	US-PATENT-APPL-SN-684194	c 35	N85-20300 *
US-PATENT-APPL-SN-657907	c 27	N78-17213 *	US-PATENT-APPL-SN-672223	c 51	N78-27733 *	US-PATENT-APPL-SN-684209	c 10	N71-19418 *
US-PATENT-APPL-SN-657905	c 35	N77-22450 *	US-PATENT-APPL-SN-672232	c 15	N71-23815 *	US-PATENT-APPL-SN-684894	c 17	N71-26773 *
US-PATENT-APPL-SN-657906	c 60	N78-10709 *	US-PATENT-APPL-SN-672383	c 15	N71-24045 *	US-PATENT-APPL-SN-685027	c 25	N78-10225 *
US-PATENT-APPL-SN-657997	c 60	N77-32731 *	US-PATENT-APPL-SN-672384	c 15	N71-27067 *	US-PATENT-APPL-SN-685463	c 15	N71-23254 *
US-PATENT-APPL-SN-657998	c 27	N78-32262 *	US-PATENT-APPL-SN-672388	c 26	N72-17820 *	US-PATENT-APPL-SN-685473	c 17	N71-16044 *
US-PATENT-APPL-SN-658132	c 44	N77-32580 *	US-PATENT-APPL-SN-672636	c 37	N79-11405 *	US-PATENT-APPL-SN-685497	c 07	N69-39974 *
US-PATENT-APPL-SN-658133	c 71	N78-10837 *	US-PATENT-APPL-SN-672695	c 27	N78-17206 *	US-PATENT-APPL-SN-685507	c 37	N86-21850 *
US-PATENT-APPL-SN-658400	c 10	N72-20225 *	US-PATENT-APPL-SN-672815	c 37	N77-23482 *	US-PATENT-APPL-SN-685748	c 07	N71-11282 *
US-PATENT-APPL-SN-658449	c 32	N77-20289 *	US-PATENT-APPL-SN-673226	c 08	N71-12502 *	US-PATENT-APPL-SN-685750	c 27	N71-16392 *
US-PATENT-APPL-SN-658450	c 37	N77-22482 *	US-PATENT-APPL-SN-673228	c 07	N71-24964 *	US-PATENT-APPL-SN-685764	c 14	N69-27459 *
US-PATENT-APPL-SN-658487	c 37	N81-25371 *	US-PATENT-APPL-SN-673229	c 07	N71-19433 *	US-PATENT-APPL-SN-685766	c 15	N69-21924 *
US-PATENT-APPL-SN-658855	c 14	N71-15605 *	US-PATENT-APPL-SN-673239	c 33	N71-15641 *	US-PATENT-APPL-SN-685787	c 14	N71-18625 *
US-PATENT-APPL-SN-658856	c 15	N71-15607 *	US-PATENT-APPL-SN-673685	c 60	N85-20680 *	US-PATENT-APPL-SN-686209	c 15	N71-23809 *
US-PATENT-APPL-SN-658857	c 14	N71-17584 *	US-PATENT-APPL-SN-674194	c 27	N78-17215 *	US-PATENT-APPL-SN-686248	c 14	N71-26774 *
US-PATENT-APPL-SN-658864	c 19	N71-26674 *	US-PATENT-APPL-SN-674195	c 74	N78-17866 *	US-PATENT-APPL-SN-686296	c 18	N71-14014 *
US-PATENT-APPL-SN-658999	c 44	N82-24645 *	US-PATENT-APPL-SN-674355	c 14	N71-20429 *	US-PATENT-APPL-SN-686331	c 38	N78-32447 *
US-PATENT-APPL-SN-659474	c 35	N86-26595 *	US-PATENT-APPL-SN-674357	c 14	N71-23899 *	US-PATENT-APPL-SN-686344	c 15	N71-17888 *
US-PATENT-APPL-SN-659475	c 31	N85-20156 *	US-PATENT-APPL-SN-674395	c 05	N71-12351 *	US-PATENT-APPL-SN-686449	c 34	N78-18355 *
US-PATENT-APPL-SN-659475	c 31	N86-32587 *	US-PATENT-APPL-SN-674700	c 76	N85-22178 *	US-PATENT-APPL-SN-686796	c 15	N70-33311 *
US-PATENT-APPL-SN-659882	c 37	N78-13436 *	US-PATENT-APPL-SN-675328	c 27	N77-31308 *	US-PATENT-APPL-SN-686933	c 14	N71-17588 *
US-PATENT-APPL-SN-66004	c 15	N72-25450 *	US-PATENT-APPL-SN-675328	c 10	N71-26374 *	US-PATENT-APPL-SN-686959	c 02	N85-28922 *
US-PATENT-APPL-SN-660057	c 26	N71-23654 *	US-PATENT-APPL-SN-675328	c 35	N78-15481 *	US-PATENT-APPL-SN-687251	c 52	N79-12694 *
US-PATENT-APPL-SN-660057	c 15	N71-15571 *	US-PATENT-APPL-SN-675351	c 35	N78-10429 *	US-PATENT-APPL-SN-687822	c 44	N78-14625 *
US-PATENT-APPL-SN-660057	c 15	N71-28936 *	US-PATENT-APPL-SN-676012	c 05	N71-11193 *	US-PATENT-APPL-SN-688742	c 15	N71-20441 *
US-PATENT-APPL-SN-660841	c 14	N71-15621 *	US-PATENT-APPL-SN-676015	c 14	N71-18483 *	US-PATENT-APPL-SN-688743	c 15	N71-20393 *
US-PATENT-APPL-SN-660842	c 14	N71-23726 *	US-PATENT-APPL-SN-676386	c 08	N71-12507 *	US-PATENT-APPL-SN-688805	c 14	N71-17701 *
US-PATENT-APPL-SN-660843	c 08	N71-24650 *	US-PATENT-APPL-SN-676387	c 10	N71-25950 *	US-PATENT-APPL-SN-688807	c 03	N71-23239 *
US-PATENT-APPL-SN-6610	c 15	N72-22492 *	US-PATENT-APPL-SN-676391	c 21	N71-11766 *	US-PATENT-APPL-SN-688852	c 44	N78-28594 *
US-PATENT-APPL-SN-661170	c 14	N71-24809 *	US-PATENT-APPL-SN-676432	c 28	N78-24365 *	US-PATENT-APPL-SN-688854	c 54	N77-32722 *
US-PATENT-APPL-SN-6615	c 03	N72-25019 *	US-PATENT-APPL-SN-676432	c 28	N80-20402 *	US-PATENT-APPL-SN-688856	c 54	N78-32720 *
US-PATENT-APPL-SN-6616	c 03	N72-22042 *	US-PATENT-APPL-SN-676433	c 52	N81-14103 *	US-PATENT-APPL-SN-688868	c 15	N71-17686 *
US-PATENT-APPL-SN-6617	c 15	N72-22488 *	US-PATENT-APPL-SN-676957	c 52	N77-28716 *	US-PATENT-APPL-SN-689455	c 54	N74-32546 *
US-PATENT-APPL-SN-66206	c 11	N73-13257 *	US-PATENT-APPL-SN-676957	c 32	N77-18307 *	US-PATENT-APPL-SN-690163	c 14	N71-18465 *
US-PATENT-APPL-SN-662175	c 09	N77-27131 *	US-PATENT-APPL-SN-676958	c 54	N76-22914 *	US-PATENT-APPL-SN-690172	c 11	N72-22245 *
US-PATENT-APPL-SN-662176	c 32	N77-21267 *	US-PATENT-APPL-SN-677301	c 52	N81-25661 *	US-PATENT-APPL-SN-690273	c 20	N85-20008 *
US-PATENT-APPL-SN-662181	c 25	N82-21269 *	US-PATENT-APPL-SN-677351	c 15	N73-13463 *	US-PATENT-APPL-SN-690274	c 05	N85-19981 *
US-PATENT-APPL-SN-662182	c 37	N78-27424 *	US-PATENT-APPL-SN-677352	c 35	N77-32455 *	US-PATENT-APPL-SN-690284	c 76	N85-20086 *
US-PATENT-APPL-SN-662182	c 35	N79-26372 *	US-PATENT-APPL-SN-677353	c 43	N78-10529 *	US-PATENT-APPL-SN-690815	c 32	N77-24328 *
US-PATENT-APPL-SN-662763	c 15	N73-12489 *	US-PATENT-APPL-SN-677475	c 52	N78-14773 *	US-PATENT-APPL-SN-690816	c 37	N78-25426 *
US-PATENT-APPL-SN-662828	c 11	N71-18578 *	US-PATENT-APPL-SN-677476	c 32	N71-26681 *	US-PATENT-APPL-SN-690997	c 16	N71-24828 *
US-PATENT-APPL-SN-662829	c 15	N71-15597 *	US-PATENT-APPL-SN-677505	c 14	N71-17586 *	US-PATENT-APPL-SN-690998	c 30	N71-15990 *
US-PATENT-APPL-SN-663008	c 37	N77-28486 *	US-PATENT-APPL-SN-677506	c 09	N71-13521 *	US-PATENT-APPL-SN-691046	c 36	N77-25501 *
US-PATENT-APPL-SN-663180	c 10	N71-23663 *	US-PATENT-APPL-SN-677508	c 16	N71-15567 *	US-PATENT-APPL-SN-691256	c 35	N77-31465 *
US-PATENT-APPL-SN-663640	c 27	N86-20561 *	US-PATENT-APPL-SN-678520	c 16	N71-15551 *	US-PATENT-APPL-SN-691647	c 52	N82-11770 *
US-PATENT-APPL-SN-664091	c 43	N79-17288 *	US-PATENT-APPL-SN-678700	c 28	N72-22771 *	US-PATENT-APPL-SN-691735	c 09	N71-12520 *
US-PATENT-APPL-SN-665032	c 74	N77-22950 *	US-PATENT-APPL-SN-678701	c 20	N78-24275 *	US-PATENT-APPL-SN-691736	c 18	N71-16210 *
US-PATENT-APPL-SN-665033	c 20	N77-20182 *	US-PATENT-APPL-SN-678702	c 05	N71-19439 *	US-PATENT-APPL-SN-691737	c 07	N71-24742 *
US-PATENT-APPL-SN-665209	c 14	N71-23725 *	US-PATENT-APPL-SN-678813	c 33	N81-29342 *	US-PATENT-APPL-SN-691738	c 08	N71-18694 *
US-PATENT-APPL-SN-665676	c 14	N71-19568 *	US-PATENT-APPL-SN-679055	c 08	N71-24633 *	US-PATENT-APPL-SN-691739	c 32	N71-15974 *
US-PATENT-APPL-SN-665679	c 15	N71-20395 *	US-PATENT-APPL-SN-679682	c 20	N71-16340 *	US-PATENT-APPL-SN-691909	c 05	N71-24606 *
US-PATENT-APPL-SN-665680	c 24	N71-16213 *	US-PATENT-APPL-SN-679685	c 09	N71-12521 *	US-PATENT-APPL-SN-691936	c 26	N77-32279 *
US-PATENT-APPL-SN-665681	c 15	N71-18616 *	US-PATENT-APPL-SN-679980	c 44	N82-24642 *	US-PATENT-APPL-SN-69209		



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US-PATENT-APPL-SN-692331	c 10	N71-26326 *	#	US-PATENT-APPL-SN-708658	c 33	N77-26385 *	US-PATENT-APPL-SN-724874	c 76	N78-24950 *
US-PATENT-APPL-SN-692332	c 07	N71-11281 *	#	US-PATENT-APPL-SN-708660	c 34	N78-27357 *	US-PATENT-APPL-SN-725405	c 15	N78-26134 *
US-PATENT-APPL-SN-692413	c 25	N78-25148 *	#	US-PATENT-APPL-SN-708771	c 26	N78-24333 *	US-PATENT-APPL-SN-725432	c 07	N71-24622 *
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US-PATENT-APPL-SN-692471	c 09	N71-12518 *	#	US-PATENT-APPL-SN-708796	c 36	N78-18410 *	US-PATENT-APPL-SN-725689	c 37	N85-29290 *
US-PATENT-APPL-SN-692636	c 27	N81-24258 *	#	US-PATENT-APPL-SN-708800	c 54	N78-17676 *	US-PATENT-APPL-SN-725714	c 33	N85-30202 *
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US-PATENT-APPL-SN-693420	c 31	N71-16080 *	#	US-PATENT-APPL-SN-709415	c 44	N78-27515 *	US-PATENT-APPL-SN-727480	c 14	N71-17658 *
US-PATENT-APPL-SN-694246	c 15	N71-26673 *	#	US-PATENT-APPL-SN-709622	c 33	N71-24858 *	US-PATENT-APPL-SN-727503	c 08	N81-19130 *
US-PATENT-APPL-SN-694347	c 09	N69-21927 *	#	US-PATENT-APPL-SN-70967	c 07	N73-13149 *	US-PATENT-APPL-SN-727719	c 32	N85-29121 *
US-PATENT-APPL-SN-694340	c 11	N71-17600 *	#	US-PATENT-APPL-SN-70967	c 32	N74-10132 *	US-PATENT-APPL-SN-727838	c 33	N86-20681 *
US-PATENT-APPL-SN-694345	c 10	N71-23669 *	#	US-PATENT-APPL-SN-709849	c 52	N77-25772 *	US-PATENT-APPL-SN-727931	c 36	N85-29265 *
US-PATENT-APPL-SN-694406	c 35	N79-10389 *	#	US-PATENT-APPL-SN-710032	c 54	N77-30749 *	US-PATENT-APPL-SN-728234	c 03	N71-12255 *
US-PATENT-APPL-SN-694407	c 27	N80-23452 *	#	US-PATENT-APPL-SN-710035	c 44	N78-24608 *	US-PATENT-APPL-SN-728369	c 52	N76-33835 *
US-PATENT-APPL-SN-694455	c 33	N77-13035 *	#	US-PATENT-APPL-SN-710036	c 44	N78-32539 *	US-PATENT-APPL-SN-729299	c 03	N72-15986 *
US-PATENT-APPL-SN-69488	c 23	N75-14834 *	#	US-PATENT-APPL-SN-71047	c 09	N72-21247 *	US-PATENT-APPL-SN-729704	c 37	N85-29287 *
US-PATENT-APPL-SN-695513	c 07	N78-25089 *	#	US-PATENT-APPL-SN-71048	c 18	N73-12604 *	US-PATENT-APPL-SN-729766	c 09	N85-28951 *
US-PATENT-APPL-SN-695973	c 05	N71-12343 *	#	US-PATENT-APPL-SN-710533	c 02	N71-11043 *	US-PATENT-APPL-SN-729767	c 24	N85-28975 *
US-PATENT-APPL-SN-696374	c 44	N80-29835 *	#	US-PATENT-APPL-SN-710561	c 09	N71-12517 *	US-PATENT-APPL-SN-729768	c 72	N85-29701 *
US-PATENT-APPL-SN-696679	c 38	N79-14396 *	#	US-PATENT-APPL-SN-710562	c 31	N71-16085 *	US-PATENT-APPL-SN-730045	c 32	N78-24391 *
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US-PATENT-APPL-SN-697341	c 09	N71-23188 *	#	US-PATENT-APPL-SN-710949	c 12	N71-17631 *	US-PATENT-APPL-SN-730468	c 25	N79-11152 *
US-PATENT-APPL-SN-698239	c 33	N78-17294 *	#	US-PATENT-APPL-SN-711898	c 18	N71-24934 *	US-PATENT-APPL-SN-730700	c 07	N71-24853 *
US-PATENT-APPL-SN-698292	c 15	N71-18580 *	#	US-PATENT-APPL-SN-711903	c 18	N71-26772 *	US-PATENT-APPL-SN-730701	c 12	N71-18615 *
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US-PATENT-APPL-SN-698641	c 74	N85-20686 *	#	US-PATENT-APPL-SN-711971	c 09	N71-23598 *	US-PATENT-APPL-SN-730733	c 28	N71-16224 *
US-PATENT-APPL-SN-698641	c 74	N85-20686 *	#	US-PATENT-APPL-SN-711972	c 06	N71-24607 *	US-PATENT-APPL-SN-730734	c 15	N71-17654 *
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US-PATENT-APPL-SN-698902	c 32	N78-15323 *	#	US-PATENT-APPL-SN-712099	c 23	N71-24686 *	US-PATENT-APPL-SN-731388	c 15	N71-24835 *
US-PATENT-APPL-SN-699012	c 33	N78-27326 *	#	US-PATENT-APPL-SN-712270	c 52	N79-27836 *	US-PATENT-APPL-SN-732321	c 33	N85-29149 *
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US-PATENT-APPL-SN-700120	c 15	N71-20440 *	#	US-PATENT-APPL-SN-712981	c 31	N78-25256 *	US-PATENT-APPL-SN-732831	c 15	N72-28495 *
US-PATENT-APPL-SN-700142	c 21	N71-14159 *	#	US-PATENT-APPL-SN-713027	c 37	N79-10419 *	US-PATENT-APPL-SN-732917	c 14	N71-17575 *
US-PATENT-APPL-SN-700174	c 02	N71-20570 *	#	US-PATENT-APPL-SN-713162	c 06	N71-26754 *	US-PATENT-APPL-SN-732921	c 10	N71-26544 *
US-PATENT-APPL-SN-700255	c 33	N85-20248 *	#	US-PATENT-APPL-SN-713188	c 08	N71-33110 *	US-PATENT-APPL-SN-732922	c 17	N71-28747 *
US-PATENT-APPL-SN-700302	c 11	N73-12264 *	#	US-PATENT-APPL-SN-713616	c 06	N71-27363 *	US-PATENT-APPL-SN-733039	c 07	N72-12081 *
US-PATENT-APPL-SN-700467	c 52	N79-14749 *	#	US-PATENT-APPL-SN-714051	c 33	N86-21742 *	US-PATENT-APPL-SN-73310	c 09	N72-25247 *
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US-PATENT-APPL-SN-700986	c 12	N71-26387 *	#	US-PATENT-APPL-SN-716183	c 15	N71-18132 *	US-PATENT-APPL-SN-734901	c 27	N78-17205 *
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US-PATENT-APPL-SN-701244	c 05	N72-20096 *	#	US-PATENT-APPL-SN-716795	c 14	N71-20435 *	US-PATENT-APPL-SN-735911	c 14	N70-41946 *
US-PATENT-APPL-SN-701448	c 52	N78-10686 *	#	US-PATENT-APPL-SN-716885	c 74	N78-33913 *	US-PATENT-APPL-SN-736286	c 32	N79-11265 *
US-PATENT-APPL-SN-701486	c 31	N85-29084 *	#	US-PATENT-APPL-SN-717052	c 14	N71-17626 *	US-PATENT-APPL-SN-736848	c 23	N71-16212 *
US-PATENT-APPL-SN-701635	c 12	N71-17578 *	#	US-PATENT-APPL-SN-717319	c 44	N77-31601 *	US-PATENT-APPL-SN-736909	c 37	N79-11404 *
US-PATENT-APPL-SN-701654	c 03	N71-11049 *	#	US-PATENT-APPL-SN-717320	c 44	N78-15560 *	US-PATENT-APPL-SN-736910	c 27	N78-32260 *
US-PATENT-APPL-SN-701679	c 02	N71-19287 *	#	US-PATENT-APPL-SN-717822	c 09	N71-25866 *	US-PATENT-APPL-SN-737018	c 37	N86-20801 *
US-PATENT-APPL-SN-701679	c 07	N73-20174 *	#	US-PATENT-APPL-SN-718095	c 28	N70-39899 *	US-PATENT-APPL-SN-737974	c 33	N78-18308 *
US-PATENT-APPL-SN-701732	c 24	N71-16095 *	#	US-PATENT-APPL-SN-718137	c 44	N78-31527 *	US-PATENT-APPL-SN-737975	c 32	N84-27952 *
US-PATENT-APPL-SN-701733	c 10	N71-24844 *	#	US-PATENT-APPL-SN-718244	c 05	N78-32086 *	US-PATENT-APPL-SN-738119	c 18	N71-15545 *
US-PATENT-APPL-SN-701744	c 21	N71-13958 *	#	US-PATENT-APPL-SN-718266	c 74	N78-17867 *	US-PATENT-APPL-SN-738218	c 37	N78-27425 *
US-PATENT-APPL-SN-701767	c 07	N71-26101 *	#	US-PATENT-APPL-SN-718267	c 26	N77-29260 *	US-PATENT-APPL-SN-738314	c 12	N71-17573 *
US-PATENT-APPL-SN-702115	c 71	N79-14871 *	#	US-PATENT-APPL-SN-718268	c 44	N78-33526 *	US-PATENT-APPL-SN-738315	c 14	N71-27334 *
US-PATENT-APPL-SN-702396	c 31	N71-16345 *	#	US-PATENT-APPL-SN-718279	c 15	N71-26312 *	US-PATENT-APPL-SN-738315	c 14	N72-31446 *
US-PATENT-APPL-SN-702911	c 15	N71-24875 *	#	US-PATENT-APPL-SN-718669	c 14	N71-17655 *	US-PATENT-APPL-SN-738334	c 15	N72-23497 *
US-PATENT-APPL-SN-702967	c 06	N71-24739 *	#	US-PATENT-APPL-SN-718752	c 03	N71-18698 *	US-PATENT-APPL-SN-738816	c 27	N86-20564 *
US-PATENT-APPL-SN-703107	c 37	N77-22479 *	#	US-PATENT-APPL-SN-718769	c 14	N71-17662 *	US-PATENT-APPL-SN-738931	c 35	N86-20756 *
US-PATENT-APPL-SN-703847	c 72	N85-30779 *	#	US-PATENT-APPL-SN-719029	c 14	N71-27186 *	US-PATENT-APPL-SN-739072	c 33	N75-27251 *
US-PATENT-APPL-SN-703847	c 72	N86-33127 *	#	US-PATENT-APPL-SN-719173	c 28	N70-33331 *	US-PATENT-APPL-SN-73922	c 14	N73-25461 *
US-PATENT-APPL-SN-703905	c 32	N80-14281 *	#	US-PATENT-APPL-SN-719794	c 35	N85-29219 *	US-PATENT-APPL-SN-73932	c 15	N72-22485 *
US-PATENT-APPL-SN-704180	c 36	N78-27402 *	#	US-PATENT-APPL-SN-719796	c 35	N86-32693 *	US-PATENT-APPL-SN-739391	c 09	N72-17156 *
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US-PATENT-APPL-SN-704446	c 10	N71-33407 *	#	US-PATENT-APPL-SN-719798	c 76	N85-30934 *	US-PATENT-APPL-SN-739792	c 33	N85-29150 *
US-PATENT-APPL-SN-704465	c 07	N71-24741 *	#	US-PATENT-APPL-SN-719799	c 35	N86-25752 *	US-PATENT-APPL-SN-739908	c 15	N78-25119 *
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US-PATENT-APPL-SN-704668	c 10	N71-12554 *	#	US-PATENT-APPL-SN-719870	c 07	N71-26292 *	US-PATENT-APPL-SN-739914	c 33	N78-10375 *
US-PATENT-APPL-SN-706013	c 33	N71-27862 *	#	US-PATENT-APPL-SN-720041	c 05	N71-27234 *	US-PATENT-APPL-SN-739915	c 37	N78-24544 *
US-PATENT-APPL-SN-706073	c 76	N79-11920 *	#	US-PATENT-APPL-SN-720125	c 09	N71-12539 *	US-PATENT-APPL-SN-739927	c 32	N71-16103 *
US-PATENT-APPL-SN-706424	c 27	N78-32256 *	#	US-PATENT-APPL-SN-72024	c 09	N73-12211 *	US-PATENT-APPL-SN-740153	c 28	N79-11231 *
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US-PATENT-APPL-SN-706564	c 14	N71-17587 *	#	US-PATENT-APPL-SN-721607	c 18	N71-25881 *	US-PATENT-APPL-SN-741056	c 07	N81-19116 *
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US-PATENT-APPL-SN-744573	c 44	N78-25531 *	#	US-PATENT-APPL-SN-760389	c 09	N71-24618 *	US-PATENT-APPL-SN-772187	c 25	N79-22235 *
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US-PATENT-APPL-SN-745977	c 35	N86-20754 *	#	US-PATENT-APPL-SN-761007	c 18	N71-26155 *	US-PATENT-APPL-SN-773072	c 10	N72-28241 *
US-PATENT-APPL-SN-746160	c 37	N86-20787 *	#	US-PATENT-APPL-SN-761235	c 27	N86-32569 *	US-PATENT-APPL-SN-773530	c 25	N75-29192 *
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US-PATENT-APPL-SN-746809	c 35	N86-20755 *	#	US-PATENT-APPL-SN-762935	c 14	N71-29041 *	US-PATENT-APPL-SN-774733	c 14	N72-24477 *
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US-PATENT-APPL-SN-74759	c 14	N73-20478 *	#	US-PATENT-APPL-SN-762956	c 14	N71-26827 *	US-PATENT-APPL-SN-775239	c 37	N79-14382 *
US-PATENT-APPL-SN-747674	c 27	N80-26446 *	#	US-PATENT-APPL-SN-762957	c 08	N71-27210 *	US-PATENT-APPL-SN-775548	c 33	N86-20682 *
US-PATENT-APPL-SN-747675	c 37	N78-31426 *	#	US-PATENT-APPL-SN-763040	c 14	N72-28438 *	US-PATENT-APPL-SN-775870	c 09	N71-24800 *
US-PATENT-APPL-SN-748536	c 33	N86-20680 *	#	US-PATENT-APPL-SN-763355	c 06	N71-28620 *	US-PATENT-APPL-SN-775870	c 09	N72-22196 *
US-PATENT-APPL-SN-74861	c 27	N72-25699 *	#	US-PATENT-APPL-SN-763684	c 15	N72-16329 *	US-PATENT-APPL-SN-775877	c 02	N71-11039 *
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US-PATENT-APPL-SN-749121	c 07	N72-11149 *	#	US-PATENT-APPL-SN-763705	c 09	N71-18720 *	US-PATENT-APPL-SN-775968	c 31	N86-20587 *
US-PATENT-APPL-SN-749148	c 10	N71-19421 *	#	US-PATENT-APPL-SN-763706	c 15	N71-24896 *	US-PATENT-APPL-SN-775989	c 71	N86-22307 *
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US-PATENT-APPL-SN-749181	c 09	N71-24803 *	#	US-PATENT-APPL-SN-763743	c 14	N72-21400 *	US-PATENT-APPL-SN-776029	c 07	N79-10057 *
US-PATENT-APPL-SN-749320	c 14	N72-22443 *	#	US-PATENT-APPL-SN-763744	c 10	N72-27246 *	US-PATENT-APPL-SN-776146	c 44	N79-17313 *
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US-PATENT-APPL-SN-750031	c 05	N73-32012 *	#	US-PATENT-APPL-SN-763869	c 17	N71-18393 *	US-PATENT-APPL-SN-777784	c 15	N71-27214 *
US-PATENT-APPL-SN-750235	c 25	N75-14844 *	#	US-PATENT-APPL-SN-764245	c 24	N80-33482 *	US-PATENT-APPL-SN-777785	c 15	N71-29018 *
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US-PATENT-APPL-SN-750786	c 07	N71-27341 *	#	US-PATENT-APPL-SN-764470	c 16	N71-28554 *	US-PATENT-APPL-SN-777786	c 31	N71-16221 *
US-PATENT-APPL-SN-750787	c 10	N71-27126 *	#	US-PATENT-APPL-SN-764805	c 37	N86-20803 *	US-PATENT-APPL-SN-777818	c 09	N71-27364 *
US-PATENT-APPL-SN-750792	c 37	N79-11402 *	#	US-PATENT-APPL-SN-764812	c 10	N71-19468 *	US-PATENT-APPL-SN-77788	c 14	N72-27412 *
US-PATENT-APPL-SN-750798	c 85	N79-17747 *	#	US-PATENT-APPL-SN-764812	c 76	N86-21401 *	US-PATENT-APPL-SN-777983	c 32	N79-24210 *
US-PATENT-APPL-SN-751061	c 18	N71-29040 *	#	US-PATENT-APPL-SN-764823	c 33	N78-17296 *	US-PATENT-APPL-SN-778195	c 24	N79-16915 *
US-PATENT-APPL-SN-751198	c 03	N71-24718 *	#	US-PATENT-APPL-SN-765-980	c 27	N86-27451 *	US-PATENT-APPL-SN-77869	c 37	N79-21345 *
US-PATENT-APPL-SN-751215	c 22	N72-20597 *	#	US-PATENT-APPL-SN-765123	c 31	N71-15687 *	US-PATENT-APPL-SN-779024	c 10	N71-27271 *
US-PATENT-APPL-SN-751266	c 15	N71-33518 *	#	US-PATENT-APPL-SN-765138	c 44	N79-10513 *	US-PATENT-APPL-SN-779025	c 09	N72-23171 *
US-PATENT-APPL-SN-751643	c 33	N86-19517 *	#	US-PATENT-APPL-SN-765139	c 44	N78-31526 *	US-PATENT-APPL-SN-779160	c 14	N72-16282 *
US-PATENT-APPL-SN-751644	c 85	N86-22452 *	#	US-PATENT-APPL-SN-765165	c 32	N79-11264 *	US-PATENT-APPL-SN-779169	c 09	N71-28618 *
US-PATENT-APPL-SN-751691	c 37	N86-19611 *	#	US-PATENT-APPL-SN-765167	c 32	N79-10263 *	US-PATENT-APPL-SN-779415	c 60	N79-20751 *
US-PATENT-APPL-SN-751695	c 71	N86-20086 *	#	US-PATENT-APPL-SN-765264	c 02	N71-29128 *	US-PATENT-APPL-SN-779428	c 34	N78-25351 *
US-PATENT-APPL-SN-752050	c 07	N81-19115 *	#	US-PATENT-APPL-SN-765738	c 03	N71-11057 *	US-PATENT-APPL-SN-779429	c 08	N79-14108 *
US-PATENT-APPL-SN-752729	c 09	N71-26787 *	#	US-PATENT-APPL-SN-765978	c 37	N86-19610 *	US-PATENT-APPL-SN-779742	c 18	N86-19344 *
US-PATENT-APPL-SN-752748	c 35	N78-25391 *	#	US-PATENT-APPL-SN-765979	c 89	N86-22459 *	US-PATENT-APPL-SN-779744	c 74	N86-20129 *
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US-PATENT-APPL-SN-753103	c 37	N80-14397 *	#	US-PATENT-APPL-SN-766170	c 07	N71-24625 *	US-PATENT-APPL-SN-779883	c 27	N79-18052 *
US-PATENT-APPL-SN-753452	c 07	N79-14096 *	#	US-PATENT-APPL-SN-766244	c 15	N71-26721 *	US-PATENT-APPL-SN-780064	c 15	N71-27372 *
US-PATENT-APPL-SN-753964	c 24	N78-27180 *	#	US-PATENT-APPL-SN-766245	c 14	N71-27215 *	US-PATENT-APPL-SN-780065	c 12	N71-28741 *
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US-PATENT-APPL-SN-753965	c 54	N79-24651 *	#	US-PATENT-APPL-SN-7668	c 15	N71-26611 *	US-PATENT-APPL-SN-78065	c 08	N72-22162 *
US-PATENT-APPL-SN-753971	c 71	N84-14873 *	#	US-PATENT-APPL-SN-766999	c 33	N80-23559 *	US-PATENT-APPL-SN-780728	c 32	N78-31321 *
US-PATENT-APPL-SN-753974	c 16	N71-33410 *	#	US-PATENT-APPL-SN-7669	c 31	N72-18859 *	US-PATENT-APPL-SN-780729	c 33	N79-22373 *
US-PATENT-APPL-SN-753976	c 54	N78-17675 *	#	US-PATENT-APPL-SN-767741	c 09	N72-27228 *	US-PATENT-APPL-SN-780873	c 32	N81-27341 *
US-PATENT-APPL-SN-753977	c 74	N79-12890 *	#	US-PATENT-APPL-SN-767911	c 09	N78-31129 *	US-PATENT-APPL-SN-780874	c 35	N78-28411 *
US-PATENT-APPL-SN-753978	c 54	N78-32721 *	#	US-PATENT-APPL-SN-767912	c 27	N79-14214 *	US-PATENT-APPL-SN-780938	c 54	N80-10799 *
US-PATENT-APPL-SN-754019	c 09	N71-25999 *	#	US-PATENT-APPL-SN-768336	c 15	N71-17648 *	US-PATENT-APPL-SN-781812	c 36	N86-20780 *
US-PATENT-APPL-SN-754020	c 12	N71-27332 *	#	US-PATENT-APPL-SN-768470	c 09	N71-28421 *	US-PATENT-APPL-SN-781813	c 27	N86-21685 *
US-PATENT-APPL-SN-754055	c 07	N71-24624 *	#	US-PATENT-APPL-SN-768473	c 14	N71-17657 *	US-PATENT-APPL-SN-782462	c 33	N79-17133 *
US-PATENT-APPL-SN-754066	c 39	N78-15512 *	#	US-PATENT-APPL-SN-768662	c 07	N73-25160 *	US-PATENT-APPL-SN-782463	c 72	N79-13826 *
US-PATENT-APPL-SN-75431	c 21	N72-31637 *	#	US-PATENT-APPL-SN-768771	c 27	N86-20565 *	US-PATENT-APPL-SN-782464	c 32	N79-14267 *
US-PATENT-APPL-SN-754362	c 27	N86-19461 *	#	US-PATENT-APPL-SN-768795	c 33	N79-10339 *	US-PATENT-APPL-SN-782480	c 33	N78-32340 *
US-PATENT-APPL-SN-754706	c 37	N86-20800 *	#	US-PATENT-APPL-SN-768942	c 46	N74-23068 *	US-PATENT-APPL-SN-782481	c 44	N78-32542 *
US-PATENT-APPL-SN-754707	c 33	N86-20679 *	#	US-PATENT-APPL-SN-76899	c 09	N72-22201 *	US-PATENT-APPL-SN-782482	c 33	N79-11315 *
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US-PATENT-APPL-SN-756266	c 15	N71-26145 *	#	US-PATENT-APPL-SN-769788	c 07	N71-11300 *	US-PATENT-APPL-SN-783374	c 15	N71-27147 *
US-PATENT-APPL-SN-756381	c 06	N71-25929 *	#	US-PATENT-APPL-SN-770203	c 05	N71-11195 *	US-PATENT-APPL-SN-783375	c 07	N71-24621 *
US-PATENT-APPL-SN-756511	c 09	N71-27016 *	#	US-PATENT-APPL-SN-770209	c 08	N71-27057 *	US-PATENT-APPL-SN-783377	c 05	N71-28619 *
US-PATENT-APPL-SN-756834	c 15	N72-21466 *	#	US-PATENT-APPL-SN-770371	c 15	N71-24599 *	US-PATENT-APPL-SN-783378	c 07	N71-19438 *
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US-PATENT-APPL-SN-757625	c 09	N71-26701 *	#	US-PATENT-APPL-SN-770398	c 06	N72-27144 *	US-PATENT-APPL-SN-783886	c 37	N86-20807 *
US-PATENT-APPL-SN-757857	c 10	N71-25900 *	#	US-PATENT-APPL-SN-770417	c 06	N73-33076 *	US-PATENT-APPL-SN-783887	c 36	N86-20779 *
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US-PATENT-APPL-SN-758390	c 28	N71-26642 *	#	US-PATENT-APPL-SN-771216	c 14	N72-17329 *	US-PATENT-APPL-SN-784521	c 14	N71-15620 *
US-PATENT-APPL-SN-758540	c 28	N73-27699 *	#	US-PATENT-APPL-SN-771245	c 27	N81-14076 *	US-PATENT-APPL-SN-784544	c 15	N72-12408 *
US-PATENT-APPL-SN-758721	c 52	N79-18580 *	#	US-PATENT-APPL-SN-771523	c 10	N71-18772 *	US-PATENT-APPL-SN-785078	c 03	N72-27053 *
US-PATENT-APPL-SN-758942	c 27	N71-14090 *	#	US-PATENT-APPL-SN-771530	c 09	N72-12136 *	US-PATENT-APPL-SN-785257	c 44	N79-14526 *
US-PATENT-APPL-SN-759220	c 27	N78-17214 *	#	US-PATENT-APPL-SN-771537	c 37	N86-20806 *	US-PATENT-APPL		

US-PATENT-APPL-SN-785710	c 05	N71-24730 *	US-PATENT-APPL-SN-802613	c 15	N72-22487 *	US-PATENT-APPL-SN-822039	c 06	N72-25149 *
US-PATENT-APPL-SN-785780	c 18	N71-28729 *	US-PATENT-APPL-SN-802816	c 31	N71-16346 *	US-PATENT-APPL-SN-822088	c 15	N71-27135 *
US-PATENT-APPL-SN-786322	c 32	N79-20296 *	US-PATENT-APPL-SN-802818	c 07	N71-29065 *	US-PATENT-APPL-SN-822089	c 23	N72-23695 *
US-PATENT-APPL-SN-7867	c 14	N72-17324 *	US-PATENT-APPL-SN-802820	c 10	N71-13545 *	US-PATENT-APPL-SN-822090	c 16	N71-27183 *
US-PATENT-APPL-SN-7868	c 10	N72-17173 *	US-PATENT-APPL-SN-802948	c 31	N71-33160 *	US-PATENT-APPL-SN-822518	c 09	N71-13522 *
US-PATENT-APPL-SN-786913	c 27	N79-12221 *	US-PATENT-APPL-SN-802972	c 09	N71-26678 *	US-PATENT-APPL-SN-822519	c 14	N71-28992 *
US-PATENT-APPL-SN-78703	c 15	N73-20514 *	US-PATENT-APPL-SN-80368	c 09	N73-20231 *	US-PATENT-APPL-SN-822534	c 09	N72-11224 *
US-PATENT-APPL-SN-78704	c 05	N72-25121 *	US-PATENT-APPL-SN-80369	c 09	N72-22198 *	US-PATENT-APPL-SN-82279	c 03	N76-32140 *
US-PATENT-APPL-SN-78717	c 05	N73-13114 *	US-PATENT-APPL-SN-803822	c 26	N79-22271 *	US-PATENT-APPL-SN-82280	c 09	N72-25262 *
US-PATENT-APPL-SN-787393	c 23	N71-26206 *	US-PATENT-APPL-SN-803822	c 26	N80-32484 *	US-PATENT-APPL-SN-823061	c 44	N79-23481 *
US-PATENT-APPL-SN-787410	c 15	N71-19213 *	US-PATENT-APPL-SN-803823	c 44	N79-11467 *	US-PATENT-APPL-SN-823566	c 74	N79-14891 *
US-PATENT-APPL-SN-78766	c 05	N74-10907 *	US-PATENT-APPL-SN-804035	c 35	N79-14348 *	US-PATENT-APPL-SN-823712	c 44	N86-21982 *
US-PATENT-APPL-SN-787846	c 23	N71-33229 *	US-PATENT-APPL-SN-804039	c 31	N86-23750 *	US-PATENT-APPL-SN-823713	c 26	N86-32556 *
US-PATENT-APPL-SN-787906	c 03	N71-26084 *	US-PATENT-APPL-SN-804040	c 32	N86-24880 *	US-PATENT-APPL-SN-824024	c 44	N79-18443 *
US-PATENT-APPL-SN-787911	c 03	N71-28579 *	US-PATENT-APPL-SN-804172	c 28	N71-26781 *	US-PATENT-APPL-SN-824042	c 23	N71-29123 *
US-PATENT-APPL-SN-788045	c 24	N79-25142 *	US-PATENT-APPL-SN-804196	c 33	N86-24909 *	US-PATENT-APPL-SN-824628	c 34	N78-17337 *
US-PATENT-APPL-SN-7880705	c 35	N78-24515 *	US-PATENT-APPL-SN-805010	c 35	N86-23899 *	US-PATENT-APPL-SN-824755	c 09	N70-33182 *
US-PATENT-APPL-SN-789043	c 10	N71-26531 *	US-PATENT-APPL-SN-805011	c 54	N86-22114 *	US-PATENT-APPL-SN-825253	c 16	N69-31343 *
US-PATENT-APPL-SN-789044	c 14	N72-20381 *	US-PATENT-APPL-SN-805012	c 27	N86-21684 *	US-PATENT-APPL-SN-825258	c 26	N72-21701 *
US-PATENT-APPL-SN-789045	c 15	N72-22489 *	US-PATENT-APPL-SN-805298	c 10	N71-25899 *	US-PATENT-APPL-SN-825259	c 14	N71-26788 *
US-PATENT-APPL-SN-789266	c 71	N86-20087 *	US-PATENT-APPL-SN-805405	c 14	N71-27323 *	US-PATENT-APPL-SN-825489	c 27	N81-15104 *
US-PATENT-APPL-SN-789278	c 15	N71-24694 *	US-PATENT-APPL-SN-805406	c 07	N71-24613 *	US-PATENT-APPL-SN-826202	c 37	N79-28551 *
US-PATENT-APPL-SN-789713	c 28	N86-23744 *	US-PATENT-APPL-SN-805549	c 35	N79-16246 *	US-PATENT-APPL-SN-826204	c 37	N79-10420 *
US-PATENT-APPL-SN-789903	c 07	N71-28429 *	US-PATENT-APPL-SN-806149	c 27	N71-18223 *	US-PATENT-APPL-SN-826326	c 46	N79-22679 *
US-PATENT-APPL-SN-790420	c 09	N71-24595 *	US-PATENT-APPL-SN-806226	c 14	N71-27407 *	US-PATENT-APPL-SN-82647	c 28	N72-22772 *
US-PATENT-APPL-SN-790556	c 08	N86-20397 *	US-PATENT-APPL-SN-806440	c 51	N79-10694 *	US-PATENT-APPL-SN-82648	c 12	N72-25292 *
US-PATENT-APPL-SN-790594	c 36	N86-20778 *	US-PATENT-APPL-SN-806572	c 27	N86-21686 *	US-PATENT-APPL-SN-82649	c 08	N73-30135 *
US-PATENT-APPL-SN-790596	c 37	N86-19612 *	US-PATENT-APPL-SN-807597	c 52	N80-16725 *	US-PATENT-APPL-SN-82658	c 30	N70-40309 *
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US-PATENT-APPL-SN-790637	c 44	N78-25529 *	US-PATENT-APPL-SN-807762	c 27	N78-31233 *	US-PATENT-APPL-SN-827579	c 15	N71-24984 *
US-PATENT-APPL-SN-791267	c 23	N72-17747 *	US-PATENT-APPL-SN-808192	c 15	N71-27432 *	US-PATENT-APPL-SN-827597	c 26	N69-33482 *
US-PATENT-APPL-SN-791268	c 33	N72-17947 *	US-PATENT-APPL-SN-808193	c 31	N71-26537 *	US-PATENT-APPL-SN-828262	c 37	N79-14383 *
US-PATENT-APPL-SN-791288	c 28	N71-25213 *	US-PATENT-APPL-SN-808462	c 10	N71-27136 *	US-PATENT-APPL-SN-828909	c 28	N71-22094 *
US-PATENT-APPL-SN-791364	c 14	N72-17328 *	US-PATENT-APPL-SN-808510	c 33	N78-32338 *	US-PATENT-APPL-SN-828920	c 35	N74-27095 *
US-PATENT-APPL-SN-791693	c 05	N71-11203 *	US-PATENT-APPL-SN-808576	c 15	N71-27754 *	US-PATENT-APPL-SN-828921	c 09	N71-27001 *
US-PATENT-APPL-SN-791888	c 23	N71-24725 *	US-PATENT-APPL-SN-808577	c 32	N71-25360 *	US-PATENT-APPL-SN-828983	c 03	N71-27419 *
US-PATENT-APPL-SN-792067	c 24	N78-17150 *	US-PATENT-APPL-SN-808822	c 14	N73-16483 *	US-PATENT-APPL-SN-828984	c 08	N71-29033 *
US-PATENT-APPL-SN-792068	c 51	N79-10693 *	US-PATENT-APPL-SN-808922	c 28	N71-27585 *	US-PATENT-APPL-SN-829042	c 35	N86-32700 *
US-PATENT-APPL-SN-792069	c 37	N79-10418 *	US-PATENT-APPL-SN-809890	c 44	N79-17314 *	US-PATENT-APPL-SN-829314	c 09	N79-31228 *
US-PATENT-APPL-SN-792623	c 14	N72-23457 *	US-PATENT-APPL-SN-809890	c 44	N80-14474 *	US-PATENT-APPL-SN-829315	c 34	N79-20336 *
US-PATENT-APPL-SN-793006	c 52	N86-19885 *	US-PATENT-APPL-SN-809975	c 44	N86-21981 *	US-PATENT-APPL-SN-829316	c 18	N79-11108 *
US-PATENT-APPL-SN-793657	c 17	N72-28536 *	US-PATENT-APPL-SN-810575	c 15	N71-27169 *	US-PATENT-APPL-SN-829317	c 52	N80-18690 *
US-PATENT-APPL-SN-793770	c 25	N71-15562 *	US-PATENT-APPL-SN-810576	c 15	N73-12492 *	US-PATENT-APPL-SN-829318	c 52	N80-14684 *
US-PATENT-APPL-SN-793771	c 14	N72-22440 *	US-PATENT-APPL-SN-810579	c 25	N82-21269 *	US-PATENT-APPL-SN-829330	c 44	N79-11469 *
US-PATENT-APPL-SN-793772	c 10	N71-18722 *	US-PATENT-APPL-SN-810579	c 09	N72-22203 *	US-PATENT-APPL-SN-829330	c 44	N80-16452 *
US-PATENT-APPL-SN-793823	c 09	N71-33109 *	US-PATENT-APPL-SN-810579	c 33	N74-22864 *	US-PATENT-APPL-SN-829825	c 03	N71-24681 *
US-PATENT-APPL-SN-794530	c 15	N72-11386 *	US-PATENT-APPL-SN-810815	c 06	N72-22107 *	US-PATENT-APPL-SN-830272	c 33	N81-29342 *
US-PATENT-APPL-SN-794968	c 15	N71-27146 *	US-PATENT-APPL-SN-81095	c 13	N72-25323 *	US-PATENT-APPL-SN-830366	c 16	N72-13437 *
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US-PATENT-APPL-SN-795217	c 33	N71-25351 *	US-PATENT-APPL-SN-811037	c 14	N71-26137 *	US-PATENT-APPL-SN-830562	c 39	N80-10507 *
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US-PATENT-APPL-SN-795945	c 37	N86-21859 *	US-PATENT-APPL-SN-811401	c 31	N81-25258 *	US-PATENT-APPL-SN-830846	c 31	N80-32584 *
US-PATENT-APPL-SN-796053	c 37	N86-19614 *	US-PATENT-APPL-SN-811509	c 02	N70-33332 *	US-PATENT-APPL-SN-830978	c 28	N71-26173 *
US-PATENT-APPL-SN-796256	c 52	N80-18691 *	US-PATENT-APPL-SN-811542	c 21	N71-24948 *	US-PATENT-APPL-SN-831118	c 08	N72-11172 *
US-PATENT-APPL-SN-796258	c 52	N82-22875 *	US-PATENT-APPL-SN-811815	c 44	N78-31525 *	US-PATENT-APPL-SN-831183	c 32	N86-24879 *
US-PATENT-APPL-SN-796263	c 27	N79-28307 *	US-PATENT-APPL-SN-811892	c 14	N71-27090 *	US-PATENT-APPL-SN-831371	c 31	N86-24867 *
US-PATENT-APPL-SN-796358	c 05	N72-11085 *	US-PATENT-APPL-SN-812447	c 71	N79-20827 *	US-PATENT-APPL-SN-831372	c 35	N86-24960 *
US-PATENT-APPL-SN-796360	c 15	N71-24696 *	US-PATENT-APPL-SN-812998	c 28	N72-22769 *	US-PATENT-APPL-SN-831377	c 37	N86-24993 *
US-PATENT-APPL-SN-796370	c 10	N71-27366 *	US-PATENT-APPL-SN-812999	c 05	N71-12345 *	US-PATENT-APPL-SN-831631	c 32	N79-20297 *
US-PATENT-APPL-SN-796405	c 14	N71-27185 *	US-PATENT-APPL-SN-813338	c 18	N72-22566 *	US-PATENT-APPL-SN-831632	c 07	N80-26298 *
US-PATENT-APPL-SN-796685	c 26	N72-28762 *	US-PATENT-APPL-SN-813488	c 15	N71-28467 *	US-PATENT-APPL-SN-831633	c 05	N80-14107 *
US-PATENT-APPL-SN-796690	c 07	N72-21119 *	US-PATENT-APPL-SN-813494	c 08	N72-11171 *	US-PATENT-APPL-SN-831634	c 05	N79-12061 *
US-PATENT-APPL-SN-796691	c 10	N71-26334 *	US-PATENT-APPL-SN-814004	c 33	N79-18193 *	US-PATENT-APPL-SN-832296	c 26	N86-26414 *
US-PATENT-APPL-SN-797056	c 15	N71-25975 *	US-PATENT-APPL-SN-814005	c 76	N79-14906 *	US-PATENT-APPL-SN-832603	c 09	N72-22199 *
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US-PATENT-APPL-SN-797210	c 28	N78-31255 *	US-PATENT-APPL-SN-815099	c 60	N86-24224 *	US-PATENT-APPL-SN-834977	c 27	N86-26434 *
US-PATENT-APPL-SN-797219	c 03	N71-33409 *	US-PATENT-APPL-SN-815103	c 60	N86-23283 *	US-PATENT-APPL-SN-834978	c 27	N86-24841 *
US-PATENT-APPL-SN-797794	c 07	N71-12396 *	US-PATENT-APPL-SN-815106	c 60	N86-24225 *	US-PATENT-APPL-SN-835058	c 21	N72-22619 *
US-PATENT-APPL-SN-797795	c 07	N71-27191 *	US-PATENT-APPL-SN-815366	c 14	N71-28994 *	US-PATENT-APPL-SN-835059	c 09	N71-26133 *
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US-PATENT-APPL-SN-799026	c 44	N79-11468 *	US-PATENT-APPL-SN-817482	c 10	N71-27338 *	US-PATENT-APPL-SN-836280	c 14	N73-14428 *
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US-PATENT-APPL-SN-800193	c 37	N86-20804 *	US-PATENT-APPL-SN-818916	c 05	N79-17847 *	US-PATENT-APPL-SN-837259	c 54	N79-24652 *
US-PATENT-APPL-SN-800204	c 06	N72-17094 *	US-PATENT-APPL-SN-818917	c 32	N79-13214 *	US-PATENT-APPL-SN-837260	c 37	N78-27423 *
US-PATENT-APPL-SN-80029	c 14	N73-32320 *	US-PATENT-APPL-SN-819029	c 20	N82-18314 *	US-PATENT-APPL-SN-837377	c 15	N71-26148 *
US-PATENT-APPL-SN-800299	c 74	N74-20008 *	US-PATENT-APPL-SN-819599	c 15	N71-19214 *	US-PATENT-APPL-SN-837378	c 15	N71-24865 *
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US-PATENT-APPL-SN-801660								

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US-PATENT-APPL-SN-836848	c 33	N86-24908 *	#	US-PATENT-APPL-SN-853716	c 09	N71-24904 *	#	US-PATENT-APPL-SN-868775	c 09	N72-25126 *	#
US-PATENT-APPL-SN-836849	c 34	N86-26575 *	#	US-PATENT-APPL-SN-853748	c 02	N72-11018 *	#	US-PATENT-APPL-SN-868776	c 09	N73-27150 *	#
US-PATENT-APPL-SN-836854	c 27	N86-24840 *	#	US-PATENT-APPL-SN-853763	c 07	N70-12616 *	#	US-PATENT-APPL-SN-868280	c 05	N72-20097 *	#
US-PATENT-APPL-SN-836855	c 27	N86-25477 *	#	US-PATENT-APPL-SN-853763	c 07	N72-33146 *	#	US-PATENT-APPL-SN-868280	c 05	N73-25125 *	#
US-PATENT-APPL-SN-839934	c 07	N72-20140 *	#	US-PATENT-APPL-SN-853855	c 17	N72-22530 *	#	US-PATENT-APPL-SN-870689	c 06	N72-25148 *	#
US-PATENT-APPL-SN-839935	c 15	N71-24895 *	#	US-PATENT-APPL-SN-853855	c 17	N72-28535 *	#	US-PATENT-APPL-SN-871207	c 23	N86-32526 *	#
US-PATENT-APPL-SN-839941	c 07	N71-26181 *	#	US-PATENT-APPL-SN-853856	c 16	N71-29131 *	#	US-PATENT-APPL-SN-872222	c 05	N72-27103 *	#
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US-PATENT-APPL-SN-839963	c 27	N81-14078 *	#	US-PATENT-APPL-SN-853984	c 21	N70-33181 *	#	US-PATENT-APPL-SN-872664	c 08	N70-34875 *	#
US-PATENT-APPL-SN-839994	c 28	N71-28915 *	#	US-PATENT-APPL-SN-854815	c 09	N71-24807 *	#	US-PATENT-APPL-SN-873045	c 14	N72-20379 *	#
US-PATENT-APPL-SN-840002	c 08	N73-20217 *	#	US-PATENT-APPL-SN-854920	c 15	N79-26100 *	#	US-PATENT-APPL-SN-873259	c 08	N72-21200 *	#
US-PATENT-APPL-SN-840176	c 28	N71-27095 *	#	US-PATENT-APPL-SN-855004	c 24	N72-11595 *	#	US-PATENT-APPL-SN-873260	c 33	N72-17948 *	#
US-PATENT-APPL-SN-840308	c 07	N71-33613 *	#	US-PATENT-APPL-SN-855384	c 52	N81-27783 *	#	US-PATENT-APPL-SN-873783	c 14	N72-21407 *	#
US-PATENT-APPL-SN-840359	c 23	N71-29125 *	#	US-PATENT-APPL-SN-855585	c 21	N70-35427 *	#	US-PATENT-APPL-SN-874177	c 11	N72-25284 *	#
US-PATENT-APPL-SN-840816	c 27	N86-25478 *	#	US-PATENT-APPL-SN-855879	c 27	N86-28435 *	#	US-PATENT-APPL-SN-874304	c 25	N86-32540 *	#
US-PATENT-APPL-SN-840825	c 36	N86-24977 *	#	US-PATENT-APPL-SN-855982	c 31	N86-27487 *	#	US-PATENT-APPL-SN-874320	c 25	N71-33612 *	#
US-PATENT-APPL-SN-840870	c 15	N71-26189 *	#	US-PATENT-APPL-SN-855983	c 03	N86-26296 *	#	US-PATENT-APPL-SN-874435	c 11	N72-29454 *	#
US-PATENT-APPL-SN-840900	c 26	N86-24814 *	#	US-PATENT-APPL-SN-856253	c 24	N74-19769 *	#	US-PATENT-APPL-SN-874673	c 27	N82-29452 *	#
US-PATENT-APPL-SN-840983	c 05	N70-33285 *	#	US-PATENT-APPL-SN-856279	c 07	N71-17599 *	#	US-PATENT-APPL-SN-874675	c 27	N82-29455 *	#
US-PATENT-APPL-SN-841278	c 33	N77-21316 *	#	US-PATENT-APPL-SN-856282	c 08	N72-22166 *	#	US-PATENT-APPL-SN-874732	c 09	N71-29139 *	#
US-PATENT-APPL-SN-841845	c 14	N73-32317 *	#	US-PATENT-APPL-SN-856327	c 05	N72-16015 *	#	US-PATENT-APPL-SN-874733	c 15	N71-26835 *	#
US-PATENT-APPL-SN-84212	c 27	N74-17283 *	#	US-PATENT-APPL-SN-856328	c 14	N72-22441 *	#	US-PATENT-APPL-SN-874958	c 31	N71-15568 *	#
US-PATENT-APPL-SN-842170	c 11	N70-33278 *	#	US-PATENT-APPL-SN-856415	c 09	N71-26182 *	#	US-PATENT-APPL-SN-87550	c 06	N72-25146 *	#
US-PATENT-APPL-SN-842171	c 11	N70-33329 *	#	US-PATENT-APPL-SN-856480	c 25	N79-24073 *	#	US-PATENT-APPL-SN-875501	c 33	N73-16918 *	#
US-PATENT-APPL-SN-84289	c 15	N73-14469 *	#	US-PATENT-APPL-SN-856461	c 34	N79-12359 *	#	US-PATENT-APPL-SN-875798	c 37	N86-32740 *	#
US-PATENT-APPL-SN-84290	c 05	N73-20137 *	#	US-PATENT-APPL-SN-856462	c 34	N80-24573 *	#	US-PATENT-APPL-SN-875799	c 34	N86-32681 *	#
US-PATENT-APPL-SN-843022	c 11	N70-33287 *	#	US-PATENT-APPL-SN-856462	c 44	N81-24519 *	#	US-PATENT-APPL-SN-875849	c 07	N71-33696 *	#
US-PATENT-APPL-SN-843032	c 28	N70-41818 *	#	US-PATENT-APPL-SN-856465	c 36	N79-14362 *	#	US-PATENT-APPL-SN-875891	c 31	N86-32589 *	#
US-PATENT-APPL-SN-843090	c 27	N79-22300 *	#	US-PATENT-APPL-SN-856466	c 44	N80-14473 *	#	US-PATENT-APPL-SN-87597	c 33	N74-22864 *	#
US-PATENT-APPL-SN-843251	c 03	N72-11062 *	#	US-PATENT-APPL-SN-856724	c 72	N80-14877 *	#	US-PATENT-APPL-SN-876299	c 44	N80-18552 *	#
US-PATENT-APPL-SN-843308	c 32	N79-14268 *	#	US-PATENT-APPL-SN-857241	c 46	N74-23069 *	#	US-PATENT-APPL-SN-876431	c 33	N74-24254 *	#
US-PATENT-APPL-SN-844225	c 05	N72-25120 *	#	US-PATENT-APPL-SN-857445	c 05	N71-24728 *	#	US-PATENT-APPL-SN-876432	c 36	N80-18372 *	#
US-PATENT-APPL-SN-844243	c 37	N75-29426 *	#	US-PATENT-APPL-SN-857987	c 15	N72-20443 *	#	US-PATENT-APPL-SN-876438	c 52	N79-26772 *	#
US-PATENT-APPL-SN-844315	c 35	N77-21392 *	#	US-PATENT-APPL-SN-858596	c 35	N78-18395 *	#	US-PATENT-APPL-SN-876440	c 51	N80-16714 *	#
US-PATENT-APPL-SN-844344	c 24	N79-14156 *	#	US-PATENT-APPL-SN-858695	c 11	N72-22247 *	#	US-PATENT-APPL-SN-876441	c 74	N79-20656 *	#
US-PATENT-APPL-SN-844346	c 44	N79-11472 *	#	US-PATENT-APPL-SN-858762	c 08	N79-23097 *	#	US-PATENT-APPL-SN-876568	c 15	N72-25452 *	#
US-PATENT-APPL-SN-844355	c 03	N72-26031 *	#	US-PATENT-APPL-SN-858764	c 33	N79-10338 *	#	US-PATENT-APPL-SN-876568	c 25	N74-30502 *	#
US-PATENT-APPL-SN-845365	c 09	N71-13518 *	#	US-PATENT-APPL-SN-858765	c 33	N79-11313 *	#	US-PATENT-APPL-SN-877445	c 23	N82-29358 *	#
US-PATENT-APPL-SN-845584	c 27	N72-22710 *	#	US-PATENT-APPL-SN-858766	c 27	N79-14213 *	#	US-PATENT-APPL-SN-877717	c 14	N72-27410 *	#
US-PATENT-APPL-SN-845807	c 15	N72-11391 *	#	US-PATENT-APPL-SN-858787	c 32	N83-19968 *	#	US-PATENT-APPL-SN-877717	c 14	N73-13417 *	#
US-PATENT-APPL-SN-845971	c 11	N71-28629 *	#	US-PATENT-APPL-SN-858936	c 07	N80-18039 *	#	US-PATENT-APPL-SN-877990	c 14	N72-28437 *	#
US-PATENT-APPL-SN-845972	c 09	N70-11148 *	#	US-PATENT-APPL-SN-858950	c 35	N78-17359 *	#	US-PATENT-APPL-SN-878253	c 25	N81-33246 *	#
US-PATENT-APPL-SN-845973	c 11	N71-24985 *	#	US-PATENT-APPL-SN-86018	c 23	N71-30292 *	#	US-PATENT-APPL-SN-878539	c 35	N80-20580 *	#
US-PATENT-APPL-SN-845974	c 33	N71-25353 *	#	US-PATENT-APPL-SN-860404	c 37	N81-15364 *	#	US-PATENT-APPL-SN-878540	c 24	N82-26384 *	#
US-PATENT-APPL-SN-845990	c 14	N71-27005 *	#	US-PATENT-APPL-SN-860405	c 26	N79-22271 *	#	US-PATENT-APPL-SN-878541	c 33	N81-14220 *	#
US-PATENT-APPL-SN-845991	c 14	N71-29134 *	#	US-PATENT-APPL-SN-860406	c 24	N79-17916 *	#	US-PATENT-APPL-SN-878542	c 33	N79-28416 *	#
US-PATENT-APPL-SN-846427	c 36	N86-24978 *	#	US-PATENT-APPL-SN-860492	c 09	N72-20199 *	#	US-PATENT-APPL-SN-878730	c 08	N72-22164 *	#
US-PATENT-APPL-SN-846428	c 34	N86-24935 *	#	US-PATENT-APPL-SN-860493	c 14	N72-16283 *	#	US-PATENT-APPL-SN-878731	c 15	N71-26162 *	#
US-PATENT-APPL-SN-846429	c 03	N86-24673 *	#	US-PATENT-APPL-SN-860635	c 28	N72-17843 *	#	US-PATENT-APPL-SN-879758	c 33	N86-32626 *	#
US-PATENT-APPL-SN-846430	c 82	N86-25292 *	#	US-PATENT-APPL-SN-860750	c 08	N72-22165 *	#	US-PATENT-APPL-SN-880246	c 28	N72-22770 *	#
US-PATENT-APPL-SN-846439	c 08	N86-24700 *	#	US-PATENT-APPL-SN-860751	c 08	N72-18184 *	#	US-PATENT-APPL-SN-880247	c 09	N70-20737 *	#
US-PATENT-APPL-SN-847023	c 31	N70-37938 *	#	US-PATENT-APPL-SN-860781	c 18	N72-22567 *	#	US-PATENT-APPL-SN-880248	c 07	N72-11150 *	#
US-PATENT-APPL-SN-847027	c 03	N70-33343 *	#	US-PATENT-APPL-SN-861152	c 14	N70-33322 *	#	US-PATENT-APPL-SN-880249	c 15	N72-22482 *	#
US-PATENT-APPL-SN-847276	c 37	N81-32510 *	#	US-PATENT-APPL-SN-861390	c 28	N79-28342 *	#	US-PATENT-APPL-SN-880250	c 03	N72-20032 *	#
US-PATENT-APPL-SN-847277	c 31	N79-28370 *	#	US-PATENT-APPL-SN-861391	c 24	N79-12541 *	#	US-PATENT-APPL-SN-880271	c 15	N72-25448 *	#
US-PATENT-APPL-SN-847278	c 34	N79-20335 *	#	US-PATENT-APPL-SN-861392	c 71	N79-23753 *	#	US-PATENT-APPL-SN-880272	c 14	N71-27058 *	#
US-PATENT-APPL-SN-847596	c 15	N70-10867 *	#	US-PATENT-APPL-SN-861396	c 35	N79-14349 *	#	US-PATENT-APPL-SN-880398	c 15	N73-12487 *	#
US-PATENT-APPL-SN-847815	c 52	N75-15270 *	#	US-PATENT-APPL-SN-861649	c 14	N72-17327 *	#	US-PATENT-APPL-SN-880726	c 44	N80-21828 *	#
US-PATENT-APPL-SN-848282	c 15	N72-21462 *	#	US-PATENT-APPL-SN-862876	c 09	N82-29330 *	#	US-PATENT-APPL-SN-880727	c 35	N79-28527 *	#
US-PATENT-APPL-SN-848325	c 06	N70-11251 *	#	US-PATENT-APPL-SN-862880	c 24	N79-31347 *	#	US-PATENT-APPL-SN-880728	c 37	N80-10494 *	#
US-PATENT-APPL-SN-848351	c 06	N70-11252 *	#	US-PATENT-APPL-SN-862921	c 31	N71-29050 *	#	US-PATENT-APPL-SN-880729	c 35	N80-20583 *	#
US-PATENT-APPL-SN-848403	c 33	N74-20859 *	#	US-PATENT-APPL-SN-863024	c 46	N80-14803 *	#	US-PATENT-APPL-SN-880831	c 11	N72-20244 *	#
US-PATENT-APPL-SN-848418	c 43	N79-26439 *	#	US-PATENT-APPL-SN-863276	c 16	N72-12440 *	#	US-PATENT-APPL-SN-880838	c 37	N79-28549 *	#
US-PATENT-APPL-SN-848419	c 43	N80-23711 *	#	US-PATENT-APPL-SN-863280	c 24	N72-33681 *	#	US-PATENT-APPL-SN-880865	c 07	N72-12060 *	#
US-PATENT-APPL-SN-848420	c 43	N79-25443 *	#	US-PATENT-APPL-SN-8636	c 15	N72-25451 *	#	US-PATENT-APPL-SN-881039	c 09	N71-24842 *	#
US-PATENT-APPL-SN-848421	c 43	N80-14423 *	#	US-PATENT-APPL-SN-863770	c 44	N79-18444 *	#	US-PATENT-APPL-SN-881041	c 09	N72-22204 *	#
US-PATENT-APPL-SN-848428	c 25	N82-21268 *	#	US-PATENT-APPL-SN-863773	c 44	N79-26475 *	#	US-PATENT-APPL-SN-882122	c 14	N72-22438 *	#
US-PATENT-APPL-SN-848481	c 17	N70-33283 *	#	US-PATENT-APPL-SN-863913	c 14	N71-28991 *	#	US-PATENT-APPL-SN-882577	c 07	N71-27056 *	#
US-PATENT-APPL-SN-848776	c 07	N72-22127 *	#	US-PATENT-APPL-SN-863914	c 09	N72-31235 *	#	US-PATENT-APPL-SN-883090	c 44	N80-29634 *	#
US-PATENT-APPL-SN-848793	c 43	N79-31706 *	#	US-PATENT-APPL-SN-863963	c 10	N71-26085 *	#	US-PATENT-APPL-SN-883094	c 54	N79-24651 *	#
US-PATENT-APPL-SN-848794	c 44	N79-24431 *	#	US-PATENT-APPL-SN-863967	c 11	N71-27036 *	#	US-PATENT-APPL-SN-883523	c 09	N72-33204 *	#
US-PATENT-APPL-SN-848805	c 06	N72-17095 *	#	US-PATENT-APPL-SN-864020	c 15	N72-17454 *	#	US-PATENT-APPL-SN-883524	c 09	N72-21246 *	#
US-PATENT-APPL-SN-848810	c 07	N72-11148 *	#	US-PATENT-APPL-SN-864039	c 15	N72-22483 *	#	US-PATENT-APPL-SN-883961	c 25	N80-16116 *	#
US-PATENT-APPL-SN-848811	c 10	N71-26142 *	#	US-PATENT-APPL-SN-864097	c 07	N71-33806 *	#	US-PATENT-APPL-SN-88435	c 35	N74-15090 *	#
US-PATENT-APPL-SN-849106	c 09	N72-22197 *	#	US-PATENT-APPL-SN-864417	c 07	N72-25171 *	#	US-PATENT-APPL-SN-885049	c 33	N79-23345 *	#
US-PATENT-APPL-SN-849274	c 28	N79-14228 *	#	US-PATENT-APPL-SN-8650	c 03	N72-25021 *	#	US-PATENT-APPL-SN-885065	c 35	N79-18296 *	#
US-PATENT-APPL-SN-84961	c 02	N70-34178 *	#	US-PATENT-APPL-SN-865106	c 09	N72-22202 *	#	US-PATENT-APPL-SN-885066	c 33	N80-26599 *	#
US-PATENT-APPL-SN-84962	c 21	N70-36943 *	#	US-PATENT-APPL-SN-865109	c 14	N71-28933 *	#	US-PATENT-APPL-SN-885067	c 33	N79-28415 *	#
US-PATENT-APPL-SN-8497	c 14	N72-11363 *	#	US-PATENT-APPL-SN-865274	c 09	N72-17155 *	#	US-PATENT-APPL-SN-885521	c 03	N72-26025 *	#
US-PATENT-APPL-SN-8498	c 05	N71-24729 *	#	US-PATENT-APPL-SN-865298	c 15	N72-11388 *	#	US-PATENT-APPL-SN-885571	c 09	N71-28886 *	#
US-PATENT-APPL-SN-850504	c 52	N81-14613 *	#	US-PATENT-APPL-SN-865329	c 15	N71-29132 *	#	US-PATENT-APPL-SN-885594	c 15	N71-29133 *	#
US-PATENT-APPL-SN-850504	c 52										

US-PATENT-APPL-SN-889374	c 08	N72-25207 *	#	US-PATENT-APPL-SN-9251	c 03	N70-34846 *	#	US-PATENT-APPL-SN-971596	c 27	N80-32516 *	#
US-PATENT-APPL-SN-889375	c 10	N72-20222 *	#	US-PATENT-APPL-SN-928128	c 44	N80-18551 *	#	US-PATENT-APPL-SN-972252	c 35	N81-33448 *	#
US-PATENT-APPL-SN-889376	c 18	N71-26285 *	#	US-PATENT-APPL-SN-928129	c 35	N80-14371 *	#	US-PATENT-APPL-SN-97343	c 10	N72-27246 *	#
US-PATENT-APPL-SN-889387	c 09	N71-29035 *	#	US-PATENT-APPL-SN-928130	c 35	N80-20559 *	#	US-PATENT-APPL-SN-974292	c 26	N80-23419 *	#
US-PATENT-APPL-SN-889420	c 14	N72-25413 *	#	US-PATENT-APPL-SN-928131	c 09	N79-31228 *	#	US-PATENT-APPL-SN-974471	c 32	N81-14185 *	#
US-PATENT-APPL-SN-889422	c 09	N72-25259 *	#	US-PATENT-APPL-SN-928133	c 44	N80-18550 *	#	US-PATENT-APPL-SN-974472	c 37	N81-15363 *	#
US-PATENT-APPL-SN-889423	c 10	N72-22236 *	#	US-PATENT-APPL-SN-928137	c 52	N80-23969 *	#	US-PATENT-APPL-SN-974473	c 60	N81-27814 *	#
US-PATENT-APPL-SN-889437	c 15	N72-11392 *	#	US-PATENT-APPL-SN-929083	c 36	N80-16321 *	#	US-PATENT-APPL-SN-974474	c 25	N81-19242 *	#
US-PATENT-APPL-SN-889438	c 15	N72-18477 *	#	US-PATENT-APPL-SN-929084	c 37	N81-19455 *	#	US-PATENT-APPL-SN-974475	c 33	N81-17349 *	#
US-PATENT-APPL-SN-889478	c 08	N71-29138 *	#	US-PATENT-APPL-SN-929086	c 24	N81-13999 *	#	US-PATENT-APPL-SN-974476	c 52	N81-14613 *	#
US-PATENT-APPL-SN-889479	c 14	N72-17325 *	#	US-PATENT-APPL-SN-929087	c 35	N80-28687 *	#	US-PATENT-APPL-SN-97472	c 14	N73-28487 *	#
US-PATENT-APPL-SN-889551	c 21	N72-21624 *	#	US-PATENT-APPL-SN-929088	c 74	N80-24149 *	#	US-PATENT-APPL-SN-97829	c 06	N73-13129 *	#
US-PATENT-APPL-SN-889554	c 15	N72-20444 *	#	US-PATENT-APPL-SN-931090	c 37	N80-26658 *	#	US-PATENT-APPL-SN-98517	c 09	N72-25250 *	#
US-PATENT-APPL-SN-889555	c 09	N72-17154 *	#	US-PATENT-APPL-SN-931090	c 37	N82-19540 *	#	US-PATENT-APPL-SN-98640	c 09	N72-25253 *	#
US-PATENT-APPL-SN-889556	c 14	N72-18411 *	#	US-PATENT-APPL-SN-931217	c 37	N80-32716 *	#	US-PATENT-APPL-SN-98772	c 08	N73-12176 *	#
US-PATENT-APPL-SN-889557	c 11	N72-17183 *	#	US-PATENT-APPL-SN-931218	c 20	N80-18097 *	#	US-PATENT-APPL-SN-98773	c 15	N72-22486 *	#
US-PATENT-APPL-SN-889558	c 15	N72-22491 *	#	US-PATENT-APPL-SN-933186	c 27	N80-32515 *	#	US-PATENT-APPL-SN-98774	c 14	N73-19419 *	#
US-PATENT-APPL-SN-889583	c 15	N72-21464 *	#	US-PATENT-APPL-SN-93329	c 09	N73-26195 *	#	US-PATENT-APPL-SN-98798	c 09	N73-13209 *	#
US-PATENT-APPL-SN-889584	c 08	N72-31226 *	#	US-PATENT-APPL-SN-934576	c 35	N81-18358 *	#	US-PATENT-APPL-SN-99174	c 14	N72-33377 *	#
US-PATENT-APPL-SN-889586	c 39	N79-22537 *	#	US-PATENT-APPL-SN-935827	c 37	N80-18393 *	#	US-PATENT-APPL-SN-99175	c 09	N72-25258 *	#
US-PATENT-APPL-SN-889671	c 24	N81-14000 *	#	US-PATENT-APPL-SN-93714	c 44	N82-28780 *	#	US-PATENT-APPL-SN-99198	c 31	N73-32749 *	#
US-PATENT-APPL-SN-889682	c 15	N81-33235 *	#	US-PATENT-APPL-SN-938293	c 32	N80-32605 *	#	US-PATENT-APPL-SN-99201	c 15	N73-25512 *	#
US-PATENT-APPL-SN-889682	c 15	N72-25447 *	#	US-PATENT-APPL-SN-938297	c 25	N81-14015 *	#	US-PATENT-APPL-SN-99201	c 37	N74-20063 *	#
US-PATENT-APPL-SN-890445	c 18	N86-31630 *	#	US-PATENT-APPL-SN-938298	c 33	N81-17348 *	#	US-PATENT-APPL-SN-99524	c 06	N72-27144 *	#
US-PATENT-APPL-SN-890575	c 09	N86-31594 *	#	US-PATENT-APPL-SN-938299	c 33	N81-19389 *	#	US-PATENT-APPL-SN-99901	c 37	N74-10474 *	#
US-PATENT-APPL-SN-891243	c 44	N79-25482 *	#	US-PATENT-APPL-SN-938300	c 37	N80-23654 *	#	US-PATENT-APPL-SN-99903	c 11	N73-12265 *	#
US-PATENT-APPL-SN-891244	c 05	N79-24976 *	#	US-PATENT-APPL-SN-938579	c 76	N80-32244 *	#				
US-PATENT-APPL-SN-891356	c 35	N80-18359 *	#	US-PATENT-APPL-SN-938581	c 04	N80-32359 *	#	US-PATENT-CASE-179-146-R	c 05	N83-27975 *	#
US-PATENT-APPL-SN-891358	c 44	N80-14474 *	#	US-PATENT-APPL-SN-938582	c 37	N80-23653 *	#	US-PATENT-CASE-179-179	c 05	N83-27975 *	#
US-PATENT-APPL-SN-891370	c 20	N79-20179 *	#	US-PATENT-APPL-SN-94049	c 14	N73-20476 *	#	US-PATENT-CASE-244-121	c 05	N83-19737 *	#
US-PATENT-APPL-SN-891372	c 37	N79-22474 *	#	US-PATENT-APPL-SN-940688	c 24	N79-24062 *	#	US-PATENT-CASE-244-129.4	c 05	N83-19737 *	#
US-PATENT-APPL-SN-891373	c 31	N80-18231 *	#	US-PATENT-APPL-SN-940689	c 35	N80-28686 *	#	US-PATENT-CASE-292-254	c 05	N83-19737 *	#
US-PATENT-APPL-SN-891872	c 25	N82-24312 *	#	US-PATENT-APPL-SN-940970	c 72	N80-27163 *	#	US-PATENT-CASE-356-129	c 36	N83-29680 *	#
US-PATENT-APPL-SN-89209	c 09	N72-25248 *	#	US-PATENT-APPL-SN-941711	c 24	N80-26388 *	#	US-PATENT-CASE-367-906	c 05	N83-27975 *	#
US-PATENT-APPL-SN-89210	c 07	N73-26119 *	#	US-PATENT-APPL-SN-94259	c 27	N70-35534 *	#	US-PATENT-CASE-368-10	c 35	N83-29651 *	#
US-PATENT-APPL-SN-89211	c 14	N73-12446 *	#	US-PATENT-APPL-SN-943086	c 37	N80-32717 *	#	US-PATENT-CASE-368-118	c 35	N83-29651 *	#
US-PATENT-APPL-SN-89212	c 08	N72-25208 *	#	US-PATENT-APPL-SN-943087	c 15	N78-32168 *	#	US-PATENT-CASE-368-119	c 35	N83-29651 *	#
US-PATENT-APPL-SN-893382	c 34	N79-24285 *	#	US-PATENT-APPL-SN-943088	c 18	N80-14183 *	#	US-PATENT-CASE-368-120	c 35	N83-29651 *	#
US-PATENT-APPL-SN-893383	c 31	N81-27323 *	#	US-PATENT-APPL-SN-943089	c 74	N80-21140 *	#	US-PATENT-CASE-368-6	c 35	N83-29651 *	#
US-PATENT-APPL-SN-893657	c 51	N80-27067 *	#	US-PATENT-APPL-SN-94347	c 05	N72-25122 *	#	US-PATENT-CASE-368-9	c 35	N83-29651 *	#
US-PATENT-APPL-SN-893857	c 24	N81-17170 *	#	US-PATENT-APPL-SN-94369	c 07	N71-28985 *	#				
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US-PATENT-APPL-SN-893865	c 37	N81-24443 *	#	US-PATENT-APPL-SN-945040	c 37	N82-24492 *	#				
US-PATENT-APPL-SN-893903	c 60	N81-15706 *	#	US-PATENT-APPL-SN-945041	c 43	N80-18498 *	#	US-PATENT-CLAS-165-27	c 34	N83-34221 *	#
US-PATENT-APPL-SN-894213	c 37	N80-23655 *	#	US-PATENT-APPL-SN-945043	c 33	N81-33403 *	#	US-PATENT-CLAS-361-90	c 33	N83-34190 *	#
US-PATENT-APPL-SN-897828	c 52	N81-29763 *	#	US-PATENT-APPL-SN-945044	c 54	N81-26718 *	#				
US-PATENT-APPL-SN-897829	c 44	N79-25481 *	#	US-PATENT-APPL-SN-945436	c 46	N80-24906 *	#	US-PATENT-CLASS-D12-76	c 05	N75-25914 *	#
US-PATENT-APPL-SN-897830	c 35	N80-21719 *	#	US-PATENT-APPL-SN-946990	c 28	N80-23471 *	#	US-PATENT-CLASS-D71-1	c 05	N74-10907 *	#
US-PATENT-APPL-SN-897831	c 44	N80-20808 *	#	US-PATENT-APPL-SN-946991	c 31	N81-27324 *	#				
US-PATENT-APPL-SN-897832	c 31	N78-24387 *	#	US-PATENT-APPL-SN-946992	c 45	N80-14579 *	#	US-PATENT-CLASS-100-299	c 15	N72-20446 *	#
US-PATENT-APPL-SN-897832	c 43	N81-26509 *	#	US-PATENT-APPL-SN-946994	c 44	N79-31753 *	#	US-PATENT-CLASS-100-8	c 33	N74-17928 *	#
US-PATENT-APPL-SN-897840	c 31	N81-14137 *	#	US-PATENT-APPL-SN-947000	c 28	N81-15119 *	#	US-PATENT-CLASS-101-395	c 35	N84-22930 *	#
US-PATENT-APPL-SN-899123	c 44	N79-14528 *	#	US-PATENT-APPL-SN-94952	c 14	N70-34158 *	#	US-PATENT-CLASS-101-407BP	c 37	N84-12491 *	#
US-PATENT-APPL-SN-899828	c 32	N80-18252 *	#	US-PATENT-APPL-SN-949886	c 33	N80-18285 *	#	US-PATENT-CLASS-102-101	c 28	N71-26779 *	#
US-PATENT-APPL-SN-900659	c 27	N81-17261 *	#	US-PATENT-APPL-SN-950876	c 37	N80-31790 *	#	US-PATENT-CLASS-102-103	c 20	N78-32179 *	#
US-PATENT-APPL-SN-900841	c 32	N82-31583 *	#	US-PATENT-APPL-SN-950877	c 52	N81-25660 *	#	US-PATENT-CLASS-102-105	c 33	N72-17947 *	#
US-PATENT-APPL-SN-900842	c 32	N79-24203 *	#	US-PATENT-APPL-SN-951422	c 51	N81-14805 *	#	US-PATENT-CLASS-102-105	c 33	N72-25911 *	#
US-PATENT-APPL-SN-900843	c 44	N80-20810 *	#	US-PATENT-APPL-SN-951423	c 48	N80-18667 *	#	US-PATENT-CLASS-102-105	c 33	N73-25952 *	#
US-PATENT-APPL-SN-901055	c 76	N80-32245 *	#	US-PATENT-APPL-SN-951828	c 37	N80-29703 *	#	US-PATENT-CLASS-102-105	c 27	N74-27037 *	#
US-PATENT-APPL-SN-903019	c 46	N80-10709 *	#	US-PATENT-APPL-SN-951829	c 33	N80-18287 *	#	US-PATENT-CLASS-102-105	c 24	N79-25142 *	#
US-PATENT-APPL-SN-90595	c 03	N72-20031 *	#	US-PATENT-APPL-SN-951830	c 28	N80-28536 *	#	US-PATENT-CLASS-102-21.6	c 46	N79-22679 *	#
US-PATENT-APPL-SN-906297	c 44	N79-14529 *	#	US-PATENT-APPL-SN-95183	c 08	N73-12175 *	#	US-PATENT-CLASS-102-28EB	c 28	N79-27425 *	#
US-PATENT-APPL-SN-906298	c 76	N80-18951 *	#	US-PATENT-APPL-SN-95189	c 74	N77-21941 *	#	US-PATENT-CLASS-102-28R	c 28	N79-11231 *	#
US-PATENT-APPL-SN-906299	c 27	N80-16158 *	#	US-PATENT-APPL-SN-953313	c 32	N81-14187 *	#	US-PATENT-CLASS-102-289	c 27	N82-24339 *	#
US-PATENT-APPL-SN-907421	c 37	N81-14318 *	#	US-PATENT-APPL-SN-953314	c 37	N81-14319 *	#	US-PATENT-CLASS-102-34.4	c 07	N72-25171 *	#
US-PATENT-APPL-SN-907431	c 37	N81-25370 *	#	US-PATENT-APPL-SN-953389	c 74	N79-14892 *	#	US-PATENT-CLASS-102-378	c 01	N83-35592 *	#
US-PATENT-APPL-SN-907435	c 27	N80-10358 *	#	US-PATENT-APPL-SN-953389	c 74	N80-27185 *	#	US-PATENT-CLASS-102-39	c 20	N78-24725 *	#
US-PATENT-APPL-SN-907436	c 37	N80-14398 *	#	US-PATENT-APPL-SN-953390	c 74	N80-21138 *	#	US-PATENT-CLASS-102-49.3	c 20	N77-17143 *	#
US-PATENT-APPL-SN-907479	c 27	N80-24438 *	#	US-PATENT-APPL-SN-953391	c 72	N80-33186 *	#	US-PATENT-CLASS-102-49.5	c 31	N71-15687 *	#
US-PATENT-APPL-SN-909100	c 37	N79-28550 *	#	US-PATENT-APPL-SN-956160	c 32	N80-18253 *	#	US-PATENT-CLASS-102-49.5	c 15	N71-22874 *	#
US-PATENT-APPL-SN-909235	c 07	N81-19115 *	#	US-PATENT-APPL-SN-956161	c 27	N79-11215 *	#	US-PATENT-CLASS-102-49.5	c 31	N71-23008 *	#
US-PATENT-APPL-SN-909608	c 07	N81-19116 *	#	US-PATENT-APPL-SN-956166	c 33	N81-19393 *	#	US-PATENT-CLASS-102-49.5	c 31	N73-14853 *	#
US-PATENT-APPL-SN-910707	c 32	N80-20448 *	#	US-PATENT-APPL-SN-956168	c 37	N81-25209 *	#	US-PATENT-CLASS-102-49.7	c 28	N73-24784 *	#
US-PATENT-APPL-SN-910708	c 06	N80-18036 *	#	US-PATENT-APPL-SN-956529	c 35	N80-26635 *	#	US-PATENT-CLASS-102-49.7	c 20	N78-24752 *	#
US-PATENT-APPL-SN-910793	c 44	N80-16452 *	#	US-PATENT-APPL-SN-957452	c 32	N80-24510 *	#	US-PATENT-CLASS-102-49.8	c 28	N73-24784 *	#
US-PATENT-APPL-SN-910794	c 14	N81-26161 *	#	US-PATENT-APPL-SN-958573	c 25	N80-20334 *	#	US-PATENT-CLASS-102-49	c 33	N70-36846 *	#
US-PATENT-APPL-SN-910992	c 52	N78-27750 *	#	US-PATENT-APPL-SN-958575	c 27	N80-24437 *	#	US-PATENT-CLASS-102-49	c 28	N70-38181 *	#
US-PATENT-APPL-SN-911092	c 52	N81-24711 *	#	US-PATENT-APPL-SN-961831	c 33	N81-25299 *	#	US-PATENT-CLASS-102-49	c 03	N70-39930 *	#
US-PATENT-APPL-SN-91180	c 14	N70-40240 *	#	US-PATENT-APPL-SN-961832	c 37	N81-24442 *	#	US-PATENT-CLASS-102-49	c 15	N70-41679 *	#
US-PATENT-APPL-SN-912276	c 24	N81-29163 *	#	US-PATENT-APPL-SN-961833	c 37	N82-21587 *	#	US-PATENT-CLASS-102-49	c 28	N70-41967 *	#
US-PATENT-APPL-SN-914260	c 44	N79-26474 *	#	US-PATENT-APPL-SN-964009	c 02	N80-20224 *	#	US-PATENT-CLASS-102-49	c 31	N71-10582 *	#
US-PATENT-APPL-SN-915050	c 44	N81-12542 *	#	US-PATENT-APPL-SN-964754	c 33	N80-20487 *	#	US-PATENT-CLASS-102-49	c 15	N71-13789 *	#
US-PATENT-APPL-SN-91642	c 14	N72-31446 *	#	US-PATENT-APPL-SN-964754	c 44	N81-29524 *	#	US-PATENT-CLASS-102-49	c 31	N71-15692 *	#
US-PATENT-APPL-SN-916654	c 07	N81-29129 *	#	US-PATENT-APPL-SN-965367	c 33	N81-14221 *	#	US-PATENT-CLASS-102-49	c 31	N71-17730 *	#
US-PATENT-APPL-SN-916655	c 44	N80-14472 *	#	US-PATENT-APPL-SN-965368	c 74	N81-17888 *	#	US-PATENT-CLASS-102-504	c 15	N82-24272 *	#
US-PATENT-APPL-SN-918533	c 32	N79-23310 *	#	US-PATENT-APPL-SN-966975	c 05	N81-19087					



US-PATENT-CLASS-103.5R	c 04	N73-27052 *	US-PATENT-CLASS-110-347	c 31	N81-15154 *	US-PATENT-CLASS-118-11	c 15	N71-17647 *
US-PATENT-CLASS-103-1	c 26	N71-21824 *	US-PATENT-CLASS-112-402	c 18	N71-26285 *	US-PATENT-CLASS-118-300	c 71	N84-16940 *
US-PATENT-CLASS-103-37	c 28	N71-14058 *	US-PATENT-CLASS-113-116	c 15	N71-15597 *	US-PATENT-CLASS-118-308	c 17	N71-24911 *
US-PATENT-CLASS-103-48	c 15	N71-24042 *	US-PATENT-CLASS-114-122	c 02	N73-26006 *	US-PATENT-CLASS-118-313	c 51	N77-27677 *
US-PATENT-CLASS-104-DIG.4	c 44	N84-23019 *	US-PATENT-CLASS-114-16.6	c 37	N76-22540 *	US-PATENT-CLASS-118-320	c 37	N82-24492 *
US-PATENT-CLASS-104-138R	c 85	N74-34672 *	US-PATENT-CLASS-114-66.5	c 12	N70-33305 *	US-PATENT-CLASS-118-423	c 37	N82-12441 *
US-PATENT-CLASS-104-139	c 05	N71-28619 *	US-PATENT-CLASS-115-103.5	c 51	N75-13502 *	US-PATENT-CLASS-118-43	c 25	N75-29192 *
US-PATENT-CLASS-104-1	c 05	N71-28619 *	US-PATENT-CLASS-116-114.5	c 35	N75-25122 *	US-PATENT-CLASS-118-48	c 25	N75-26043 *
US-PATENT-CLASS-104-23FS	c 85	N74-34672 *	US-PATENT-CLASS-116-114AH	c 14	N72-25411 *	US-PATENT-CLASS-118-49.1	c 15	N72-32487 *
US-PATENT-CLASS-104-281	c 37	N85-20337 *	US-PATENT-CLASS-116-114AH	c 35	N75-33367 *	US-PATENT-CLASS-118-49.1	c 31	N75-12161 *
US-PATENT-CLASS-104-282	c 37	N83-32067 *	US-PATENT-CLASS-116-117	c 14	N70-42074 *	US-PATENT-CLASS-118-49.1	c 25	N75-26043 *
US-PATENT-CLASS-104-284	c 37	N85-20337 *	US-PATENT-CLASS-117-104	c 18	N71-26100 *	US-PATENT-CLASS-118-49.5	c 09	N71-26701 *
US-PATENT-CLASS-104-290	c 37	N83-32067 *	US-PATENT-CLASS-117-105.2	c 37	N74-11301 *	US-PATENT-CLASS-118-49	c 25	N79-28253 *
US-PATENT-CLASS-104-83	c 37	N82-21587 *	US-PATENT-CLASS-117-105.2	c 24	N75-33181 *	US-PATENT-CLASS-118-50.1	c 71	N84-16940 *
US-PATENT-CLASS-105-1A	c 37	N82-21587 *	US-PATENT-CLASS-117-105.5	c 15	N73-32360 *	US-PATENT-CLASS-118-50.1	c 36	N84-22944 *
US-PATENT-CLASS-105-161	c 43	N79-26439 *	US-PATENT-CLASS-117-105	c 15	N73-32360 *	US-PATENT-CLASS-118-500	c 37	N78-17383 *
US-PATENT-CLASS-105-171	c 37	N82-21587 *	US-PATENT-CLASS-117-106A	c 70	N74-13436 *	US-PATENT-CLASS-118-500	c 37	N82-12441 *
US-PATENT-CLASS-105-180	c 37	N82-21587 *	US-PATENT-CLASS-117-106A	c 37	N75-15992 *	US-PATENT-CLASS-118-500	c 37	N82-24492 *
US-PATENT-CLASS-105-2R	c 85	N82-33288 *	US-PATENT-CLASS-117-106A	c 25	N75-26043 *	US-PATENT-CLASS-118-503	c 71	N84-16940 *
US-PATENT-CLASS-105-218R	c 37	N82-21587 *	US-PATENT-CLASS-117-106	c 33	N71-14032 *	US-PATENT-CLASS-118-503	c 37	N82-24492 *
US-PATENT-CLASS-106-1.2	c 44	N79-31752 *	US-PATENT-CLASS-117-107.2	c 25	N75-26043 *	US-PATENT-CLASS-118-505	c 37	N82-24492 *
US-PATENT-CLASS-106-13	c 23	N75-14834 *	US-PATENT-CLASS-117-107	c 15	N72-25447 *	US-PATENT-CLASS-118-50	c 37	N78-17383 *
US-PATENT-CLASS-106-15FP	c 27	N74-27037 *	US-PATENT-CLASS-117-107	c 76	N79-16678 *	US-PATENT-CLASS-118-50	c 37	N81-33482 *
US-PATENT-CLASS-106-15FP	c 27	N76-24405 *	US-PATENT-CLASS-117-119	c 18	N71-16105 *	US-PATENT-CLASS-118-50	c 71	N84-16940 *
US-PATENT-CLASS-106-15FP	c 24	N78-15180 *	US-PATENT-CLASS-117-119	c 76	N79-16678 *	US-PATENT-CLASS-118-52	c 37	N81-33482 *
US-PATENT-CLASS-106-15R	c 23	N75-14834 *	US-PATENT-CLASS-117-124C	c 15	N72-25452 *	US-PATENT-CLASS-118-57	c 71	N84-16940 *
US-PATENT-CLASS-106-15	c 18	N71-14014 *	US-PATENT-CLASS-117-124F	c 23	N75-14834 *	US-PATENT-CLASS-118-624	c 36	N84-22944 *
US-PATENT-CLASS-106-15	c 18	N71-15469 *	US-PATENT-CLASS-117-126GM	c 37	N75-26371 *	US-PATENT-CLASS-118-62	c 71	N84-16940 *
US-PATENT-CLASS-106-18.16	c 27	N82-16238 *	US-PATENT-CLASS-117-126GR	c 27	N74-23125 *	US-PATENT-CLASS-118-641	c 36	N84-22944 *
US-PATENT-CLASS-106-18.24	c 27	N82-16238 *	US-PATENT-CLASS-117-126R	c 37	N75-26371 *	US-PATENT-CLASS-118-6	c 51	N77-27677 *
US-PATENT-CLASS-106-18.24	c 25	N82-29370 *	US-PATENT-CLASS-117-129	c 37	N74-21063 *	US-PATENT-CLASS-118-7	c 51	N77-27677 *
US-PATENT-CLASS-106-197	c 25	N82-29370 *	US-PATENT-CLASS-117-129	c 27	N75-27160 *	US-PATENT-CLASS-118-9	c 51	N77-27677 *
US-PATENT-CLASS-106-1	c 44	N79-31752 *	US-PATENT-CLASS-117-130R	c 15	N73-32360 *	US-PATENT-CLASS-119-15	c 11	N71-22875 *
US-PATENT-CLASS-106-209	c 05	N72-25120 *	US-PATENT-CLASS-117-132B	c 27	N74-23125 *	US-PATENT-CLASS-119-17	c 51	N81-32829 *
US-PATENT-CLASS-106-286	c 18	N72-22566 *	US-PATENT-CLASS-117-132	c 06	N72-25150 *	US-PATENT-CLASS-119-18	c 51	N81-32829 *
US-PATENT-CLASS-106-287SB	c 23	N75-14834 *	US-PATENT-CLASS-117-135.5	c 23	N75-14834 *	US-PATENT-CLASS-119-29	c 51	N78-27733 *
US-PATENT-CLASS-106-288B	c 18	N72-22566 *	US-PATENT-CLASS-117-136.8R	c 15	N73-32360 *	US-PATENT-CLASS-119-51.11	c 35	N78-19466 *
US-PATENT-CLASS-106-292	c 18	N72-17532 *	US-PATENT-CLASS-117-151	c 15	N73-32360 *	US-PATENT-CLASS-119-51.13	c 51	N74-15778 *
US-PATENT-CLASS-106-292	c 27	N77-30237 *	US-PATENT-CLASS-117-152	c 15	N72-25452 *	US-PATENT-CLASS-119-51.5	c 51	N74-15778 *
US-PATENT-CLASS-106-296	c 18	N71-26772 *	US-PATENT-CLASS-117-16R	c 15	N72-25452 *	US-PATENT-CLASS-119-51R	c 51	N74-15778 *
US-PATENT-CLASS-106-296	c 27	N77-30237 *	US-PATENT-CLASS-117-16R	c 15	N73-32360 *	US-PATENT-CLASS-119-52AF	c 51	N74-15778 *
US-PATENT-CLASS-106-296	c 24	N79-14156 *	US-PATENT-CLASS-117-161R	c 15	N73-32360 *	US-PATENT-CLASS-119-54	c 51	N74-15778 *
US-PATENT-CLASS-106-299	c 18	N72-17532 *	US-PATENT-CLASS-117-161R	c 08	N73-27980 *	US-PATENT-CLASS-119-72.5	c 35	N78-19466 *
US-PATENT-CLASS-106-299	c 27	N77-30237 *	US-PATENT-CLASS-117-161UA	c 25	N75-12087 *	US-PATENT-CLASS-119-96	c 05	N71-28619 *
US-PATENT-CLASS-106-306	c 24	N76-24363 *	US-PATENT-CLASS-117-161UN	c 08	N73-27980 *	US-PATENT-CLASS-121-38	c 15	N70-35409 *
US-PATENT-CLASS-106-39.5	c 27	N78-19302 *	US-PATENT-CLASS-117-161UN	c 27	N74-23125 *	US-PATENT-CLASS-121-38	c 02	N71-29128 *
US-PATENT-CLASS-106-39R	c 18	N73-14584 *	US-PATENT-CLASS-117-161UN	c 25	N75-12087 *	US-PATENT-CLASS-122-32	c 33	N72-20915 *
US-PATENT-CLASS-106-39	c 26	N72-28782 *	US-PATENT-CLASS-117-161UZ	c 25	N75-12087 *	US-PATENT-CLASS-122-366	c 34	N85-29180 *
US-PATENT-CLASS-106-40	c 18	N71-22998 *	US-PATENT-CLASS-117-161	c 06	N72-25150 *	US-PATENT-CLASS-122-366	c 34	N85-27593 *
US-PATENT-CLASS-106-43	c 27	N78-17206 *	US-PATENT-CLASS-117-2R	c 32	N74-27612 *	US-PATENT-CLASS-122-4D	c 25	N82-11144 *
US-PATENT-CLASS-106-43	c 37	N81-25371 *	US-PATENT-CLASS-117-200	c 09	N72-25259 *	US-PATENT-CLASS-123-DIG.12	c 37	N76-18457 *
US-PATENT-CLASS-106-46	c 26	N72-28782 *	US-PATENT-CLASS-117-201	c 15	N89-21460 *	US-PATENT-CLASS-123-DIG.12	c 44	N78-33526 *
US-PATENT-CLASS-106-48	c 27	N75-27160 *	US-PATENT-CLASS-117-201	c 18	N71-16048 *	US-PATENT-CLASS-123-DIG.12	c 28	N80-10374 *
US-PATENT-CLASS-106-48	c 27	N78-32290 *	US-PATENT-CLASS-117-201	c 03	N72-24037 *	US-PATENT-CLASS-123-DIG.8	c 37	N77-31497 *
US-PATENT-CLASS-106-50	c 27	N82-29452 *	US-PATENT-CLASS-117-201	c 25	N75-26043 *	US-PATENT-CLASS-123-1A	c 44	N76-29700 *
US-PATENT-CLASS-106-50	c 27	N82-29454 *	US-PATENT-CLASS-117-211	c 15	N72-25447 *	US-PATENT-CLASS-123-1A	c 44	N78-33526 *
US-PATENT-CLASS-106-50	c 27	N82-29455 *	US-PATENT-CLASS-117-212	c 09	N71-20705 *	US-PATENT-CLASS-123-102	c 11	N72-20244 *
US-PATENT-CLASS-106-52	c 37	N74-21063 *	US-PATENT-CLASS-117-212	c 15	N71-29032 *	US-PATENT-CLASS-123-119A	c 37	N77-31497 *
US-PATENT-CLASS-106-52	c 27	N82-29451 *	US-PATENT-CLASS-117-212	c 26	N72-28762 *	US-PATENT-CLASS-123-119E	c 37	N76-18457 *
US-PATENT-CLASS-106-52	c 27	N82-29452 *	US-PATENT-CLASS-117-217	c 15	N72-25447 *	US-PATENT-CLASS-123-120	c 37	N76-18457 *
US-PATENT-CLASS-106-52	c 27	N82-29454 *	US-PATENT-CLASS-117-217	c 26	N72-28762 *	US-PATENT-CLASS-123-121	c 37	N76-18457 *
US-PATENT-CLASS-106-52	c 27	N82-29455 *	US-PATENT-CLASS-117-21	c 18	N89-39895 *	US-PATENT-CLASS-123-122AB	c 28	N72-22772 *
US-PATENT-CLASS-106-54	c 27	N75-27160 *	US-PATENT-CLASS-117-224	c 15	N71-28582 *	US-PATENT-CLASS-123-122AB	c 37	N77-31497 *
US-PATENT-CLASS-106-54	c 27	N76-22377 *	US-PATENT-CLASS-117-228	c 08	N73-27980 *	US-PATENT-CLASS-123-122E	c 07	N77-23106 *
US-PATENT-CLASS-106-54	c 27	N76-23426 *	US-PATENT-CLASS-117-234	c 76	N79-16678 *	US-PATENT-CLASS-123-122E	c 37	N78-10487 *
US-PATENT-CLASS-106-54	c 27	N78-32260 *	US-PATENT-CLASS-117-235	c 76	N79-16678 *	US-PATENT-CLASS-123-148CB	c 33	N77-28385 *
US-PATENT-CLASS-106-54	c 27	N82-29452 *	US-PATENT-CLASS-117-237	c 76	N79-16678 *	US-PATENT-CLASS-123-148DC	c 37	N78-11405 *
US-PATENT-CLASS-106-55	c 18	N82-29454 *	US-PATENT-CLASS-117-239	c 76	N79-16678 *	US-PATENT-CLASS-123-148E	c 33	N77-28385 *
US-PATENT-CLASS-106-55	c 18	N73-14584 *	US-PATENT-CLASS-117-240	c 76	N79-16678 *	US-PATENT-CLASS-123-148E	c 37	N79-11405 *
US-PATENT-CLASS-106-58	c 18	N73-14584 *	US-PATENT-CLASS-117-33.3	c 70	N74-13436 *	US-PATENT-CLASS-123-179R	c 28	N80-10374 *
US-PATENT-CLASS-106-63	c 18	N73-14584 *	US-PATENT-CLASS-117-35R	c 06	N73-13128 *	US-PATENT-CLASS-123-197R	c 37	N83-36483 *
US-PATENT-CLASS-106-65	c 27	N78-19302 *	US-PATENT-CLASS-117-35	c 32	N79-19186 *	US-PATENT-CLASS-123-37	c 37	N77-31497 *
US-PATENT-CLASS-106-73.5	c 27	N78-19302 *	US-PATENT-CLASS-117-37	c 15	N72-25452 *	US-PATENT-CLASS-123-3	c 44	N76-18642 *
US-PATENT-CLASS-106-74	c 18	N89-39979 *	US-PATENT-CLASS-117-38	c 24	N75-33181 *	US-PATENT-CLASS-123-3	c 44	N76-29700 *
US-PATENT-CLASS-106-74	c 24	N79-31347 *	US-PATENT-CLASS-117-43	c 31	N79-21227 *	US-PATENT-CLASS-123-3	c 44	N77-10636 *
US-PATENT-CLASS-106-84	c 18	N71-24183 *	US-PATENT-CLASS-117-45	c 74	N74-20008 *	US-PATENT-CLASS-123-3	c 37	N77-31497 *
US-PATENT-CLASS-106-84	c 18	N71-24184 *	US-PATENT-CLASS-117-48FS	c 24	N75-33181 *	US-PATENT-CLASS-123-3	c 44	N78-33526 *
US-PATENT-CLASS-106-84	c 18	N72-22566 *	US-PATENT-CLASS-117-46	c 15	N71-18077 *	US-PATENT-CLASS-123-3	c 28	N80-10374 *
US-PATENT-CLASS-106-84	c 18	N72-23581 *	US-PATENT-CLASS-117-47R	c 15	N72-25452 *	US-PATENT-CLASS-123-41.33	c 07	N77-23106 *
US-PATENT-CLASS-106-84	c 24	N79-14156 *	US-PATENT-CLASS-117-50	c 15	N71-15610 *	US-PATENT-CLASS-123-41.33	c 37	N78-10487 *
US-PATENT-CLASS-106-84	c 24	N79-31347 *	US-PATENT-CLASS-117-62	c 15	N72-25447 *	US-PATENT-CLASS-123-59E	c 37	N77-31497 *
US-PATENT-CLASS-106-88	c 18	N71-18124 *	US-PATENT-CLASS-117-62	c 15	N72-25452 *	US-PATENT-CLASS-123-78E	c 37	N83-36483 *
US-PATENT-CLASS-106-136	c 09	N75-12968 *	US-PATENT-CLASS-117-65.2	c 18	N71-10772 *	US-PATENT-CLASS-123-89A	c 37	N78-18457 *
US-PATENT-CLASS-109-49.5	c 31	N81-19343 *	US-PATENT-CLASS-117-66	c 15	N73-32360 *	US-PATENT-CLASS-124-11R	c 75	N76-17951 *
US-PATENT-CLASS-109-58.5	c 31	N81-19343 *	US-PATENT-CLASS-117-69	c 18	N70-36400 *	US-PATENT-CLASS-124-1	c 75	N78-17951 *
US-PATENT-CLASS-110-186	c 25	N84-18276 *	US-PATENT-CLASS-117-89	c 15	N71-16075 *	US-PATENT-CLASS-124-56	c 18	N86-20469 *
US-PATENT-CLASS-110-118	c 31	N81-15154 *	US-PATENT-CLASS-117-6	c 14	N71-20461 *	US-PATENT-CLASS-124-6	c 09	N77-19076 *
US-PATENT-CLASS-110-229	c 31	N81-15154 *	US-PATENT-CLASS-117-7	c 27	N81-15104 *	US-PATENT-CLASS-125-13R	c 37	N85-21650 *
US-PATENT-CLASS-110-232	c 31	N81-15154 *	US-PATENT-CLASS-117-7.2	c 35	N75-25122 *	US-PATENT-CLASS-125-15	c 37	N85-21650 *
US-PATENT-CLASS-110-234	c 25	N82-11144 *	US-PATENT-CLASS-117-8.5	c 24	N75-33181 *	US-PATENT-CLASS-125-1	c 46	N74-23069 *
US-PATENT-CLASS-110-245	c 25	N82-11144 *	US-PATENT-CLASS-117-93.1GD	c 25	N75-12087 *	US-PATENT-CLASS-125-20	c 31	N83-27058 *
US-PATENT-CLASS-110-255	c 25	N82-11144 *	US-PATENT-CLASS-117-93.1BD	c 15	N72-25447 *	US-PATENT-CLASS-125-21	c 37	N80-29703 *
US-PATENT-CLASS-110-262	c 25	N84-18276 *	US-PATENT-CLASS-117-93.3	c 15	N72-25452 *	US-PATENT-CLASS-125-23R	c 76	N80-18951 *
US-PATENT-CLASS-110-263	c 25	N84-18276 *	US-PATENT-CLASS-117-95	c 37	N75-15992 *	US-PATENT-CLASS-125-23R	c 37	N82-32730 *
US-PATENT-CLASS-110-265	c 25	N84-18276 *	US-PATENT-CLASS-117-95	c 24	N74-19769 *	US-PATENT-CLASS-125-3	c 46	N74-23069 *
US-PATENT-CLASS-110-266	c 25	N82-11144 *	US-PATENT-CLASS-117-95	c 36	N75-15029 *	US-PATENT-CLASS-126-DIG.1	c 44	N85-30474 *
US-PATENT-CLASS-110-343	c 31	N81-15154 *	US-PATENT-CLASS-117-97	c 36	N75-15029 *			



US-PATENT-CLASS-126-263	c 44	N77-32581 *	US-PATENT-CLASS-128-142.5	c 05	N73-25125 *	US-PATENT-CLASS-128-272	c 15	N71-24835 *
US-PATENT-CLASS-126-263	c 44	N78-17460 *	US-PATENT-CLASS-128-142.7	c 54	N78-32721 *	US-PATENT-CLASS-128-272	c 52	N79-14749 *
US-PATENT-CLASS-126-263	c 44	N80-20808 *	US-PATENT-CLASS-128-142R	c 54	N80-10799 *	US-PATENT-CLASS-128-275	c 15	N71-24835 *
US-PATENT-CLASS-126-263	c 35	N85-29214 *	US-PATENT-CLASS-128-145.8	c 54	N75-27761 *	US-PATENT-CLASS-128-275	c 52	N81-29763 *
US-PATENT-CLASS-126-270	c 09	N70-40234 *	US-PATENT-CLASS-128-15R	c 54	N84-16803 *	US-PATENT-CLASS-128-276	c 52	N80-14684 *
US-PATENT-CLASS-126-270	c 03	N70-41580 *	US-PATENT-CLASS-128-191R	c 25	N74-12813 *	US-PATENT-CLASS-128-276	c 52	N80-18690 *
US-PATENT-CLASS-126-270	c 34	N74-23039 *	US-PATENT-CLASS-128-191R	c 54	N80-10799 *	US-PATENT-CLASS-128-280	c 24	N82-29362 *
US-PATENT-CLASS-126-270	c 44	N76-14595 *	US-PATENT-CLASS-128-1	c 05	N70-11819 *	US-PATENT-CLASS-128-283	c 05	N69-23192 *
US-PATENT-CLASS-126-270	c 44	N76-23675 *	US-PATENT-CLASS-128-1	c 05	N71-20268 *	US-PATENT-CLASS-128-283	c 24	N82-29362 *
US-PATENT-CLASS-126-270	c 44	N76-24696 *	US-PATENT-CLASS-128-2.05A	c 52	N74-26626 *	US-PATENT-CLASS-128-284	c 24	N82-29362 *
US-PATENT-CLASS-126-270	c 35	N77-20401 *	US-PATENT-CLASS-128-2.05A	c 54	N75-13531 *	US-PATENT-CLASS-128-285	c 24	N82-29362 *
US-PATENT-CLASS-126-270	c 44	N77-32582 *	US-PATENT-CLASS-128-2.05E	c 52	N74-27566 *	US-PATENT-CLASS-128-288	c 24	N82-29362 *
US-PATENT-CLASS-126-270	c 44	N78-15560 *	US-PATENT-CLASS-128-2.05E	c 52	N76-29896 *	US-PATENT-CLASS-128-291	c 24	N82-29362 *
US-PATENT-CLASS-126-270	c 44	N78-19599 *	US-PATENT-CLASS-128-2.05F	c 14	N73-32326 *	US-PATENT-CLASS-128-295	c 05	N72-22093 *
US-PATENT-CLASS-126-270	c 44	N78-31526 *	US-PATENT-CLASS-128-2.05P	c 54	N75-13531 *	US-PATENT-CLASS-128-295	c 52	N81-24711 *
US-PATENT-CLASS-126-270	c 44	N79-11471 *	US-PATENT-CLASS-128-2.05R	c 05	N73-27941 *	US-PATENT-CLASS-128-295	c 52	N81-28740 *
US-PATENT-CLASS-126-270	c 44	N79-14526 *	US-PATENT-CLASS-128-2.05R	c 52	N76-29896 *	US-PATENT-CLASS-128-296	c 24	N80-29362 *
US-PATENT-CLASS-126-270	c 44	N79-23481 *	US-PATENT-CLASS-128-2.05R	c 52	N79-10724 *	US-PATENT-CLASS-128-29	c 05	N72-23922 *
US-PATENT-CLASS-126-270	c 44	N79-24432 *	US-PATENT-CLASS-128-2.05S	c 52	N74-26626 *	US-PATENT-CLASS-128-2	c 05	N73-27062 *
US-PATENT-CLASS-126-271	c 44	N75-32581 *	US-PATENT-CLASS-128-2.05T	c 52	N74-12778 *	US-PATENT-CLASS-128-303B	c 52	N83-25346 *
US-PATENT-CLASS-126-271	c 44	N76-14602 *	US-PATENT-CLASS-128-2.05V	c 35	N76-24525 *	US-PATENT-CLASS-128-303R	c 52	N77-28716 *
US-PATENT-CLASS-126-271	c 44	N76-22657 *	US-PATENT-CLASS-128-2.05Z	c 54	N75-27760 *	US-PATENT-CLASS-128-305	c 05	N73-27062 *
US-PATENT-CLASS-126-271	c 44	N76-24696 *	US-PATENT-CLASS-128-2.05Z	c 52	N79-18580 *	US-PATENT-CLASS-128-305	c 52	N75-33640 *
US-PATENT-CLASS-126-271	c 35	N77-20401 *	US-PATENT-CLASS-128-2.05	c 05	N70-41329 *	US-PATENT-CLASS-128-305	c 52	N78-14773 *
US-PATENT-CLASS-126-271	c 44	N77-32582 *	US-PATENT-CLASS-128-2.05	c 04	N71-23185 *	US-PATENT-CLASS-128-325	c 52	N84-28388 *
US-PATENT-CLASS-126-271	c 44	N78-10554 *	US-PATENT-CLASS-128-2.05	c 05	N71-27234 *	US-PATENT-CLASS-128-327	c 52	N82-11770 *
US-PATENT-CLASS-126-271	c 44	N78-17460 *	US-PATENT-CLASS-128-2.06B	c 05	N75-24716 *	US-PATENT-CLASS-128-328	c 52	N84-34913 *
US-PATENT-CLASS-126-271	c 44	N78-31525 *	US-PATENT-CLASS-128-2.06E	c 52	N76-29896 *	US-PATENT-CLASS-128-329R	c 52	N79-27836 *
US-PATENT-CLASS-126-271	c 44	N78-31526 *	US-PATENT-CLASS-128-2.06F	c 52	N74-12778 *	US-PATENT-CLASS-128-346	c 52	N81-25660 *
US-PATENT-CLASS-126-271	c 44	N79-11471 *	US-PATENT-CLASS-128-2.06R	c 05	N73-27941 *	US-PATENT-CLASS-128-346	c 52	N84-11744 *
US-PATENT-CLASS-126-271	c 44	N79-14526 *	US-PATENT-CLASS-128-2.06R	c 52	N76-14757 *	US-PATENT-CLASS-128-346	c 52	N84-28388 *
US-PATENT-CLASS-126-271	c 44	N79-14529 *	US-PATENT-CLASS-128-2.06	c 05	N69-21925 *	US-PATENT-CLASS-128-348	c 52	N80-16725 *
US-PATENT-CLASS-126-271	c 44	N79-18443 *	US-PATENT-CLASS-128-2.06	c 05	N71-22896 *	US-PATENT-CLASS-128-379	c 52	N77-14736 *
US-PATENT-CLASS-126-271	c 44	N79-23481 *	US-PATENT-CLASS-128-2.06	c 09	N71-24618 *	US-PATENT-CLASS-128-38	c 54	N84-16803 *
US-PATENT-CLASS-126-271	c 44	N79-24433 *	US-PATENT-CLASS-128-2.06	c 05	N71-28293 *	US-PATENT-CLASS-128-400	c 52	N77-14736 *
US-PATENT-CLASS-126-400	c 44	N78-15560 *	US-PATENT-CLASS-128-2.07	c 05	N73-32015 *	US-PATENT-CLASS-128-402	c 05	N72-20096 *
US-PATENT-CLASS-126-400	c 44	N79-24433 *	US-PATENT-CLASS-128-2.07	c 52	N74-20728 *	US-PATENT-CLASS-128-402	c 52	N77-14736 *
US-PATENT-CLASS-126-400	c 44	N85-30474 *	US-PATENT-CLASS-128-2.08	c 05	N69-21473 *	US-PATENT-CLASS-128-410	c 52	N77-28717 *
US-PATENT-CLASS-126-415	c 44	N84-34792 *	US-PATENT-CLASS-128-2.08	c 05	N73-32015 *	US-PATENT-CLASS-128-417	c 05	N72-25120 *
US-PATENT-CLASS-126-415	c 44	N85-30474 *	US-PATENT-CLASS-128-2.08	c 52	N74-20728 *	US-PATENT-CLASS-128-417	c 05	N72-27103 *
US-PATENT-CLASS-126-417	c 44	N80-16452 *	US-PATENT-CLASS-128-2.1A	c 09	N72-17153 *	US-PATENT-CLASS-128-418	c 52	N76-29896 *
US-PATENT-CLASS-126-417	c 34	N84-22903 *	US-PATENT-CLASS-128-2.1A	c 09	N72-22202 *	US-PATENT-CLASS-128-418	c 52	N77-14738 *
US-PATENT-CLASS-126-418	c 44	N84-28204 *	US-PATENT-CLASS-128-2.1A	c 52	N74-26625 *	US-PATENT-CLASS-128-419P	c 52	N76-29896 *
US-PATENT-CLASS-126-418	c 44	N86-27706 *	US-PATENT-CLASS-128-2.1A	c 52	N76-14757 *	US-PATENT-CLASS-128-421	c 52	N82-29863 *
US-PATENT-CLASS-126-419	c 44	N80-20810 *	US-PATENT-CLASS-128-2.1A	c 52	N76-29894 *	US-PATENT-CLASS-128-422	c 52	N82-33996 *
US-PATENT-CLASS-126-419	c 44	N81-17518 *	US-PATENT-CLASS-128-2.1A	c 52	N79-18580 *	US-PATENT-CLASS-128-62A	c 52	N82-29862 *
US-PATENT-CLASS-126-419	c 44	N84-28203 *	US-PATENT-CLASS-128-2.1E	c 05	N72-27103 *	US-PATENT-CLASS-128-639	c 52	N79-27836 *
US-PATENT-CLASS-126-419	c 44	N85-30474 *	US-PATENT-CLASS-128-2.1E	c 35	N76-24525 *	US-PATENT-CLASS-128-642	c 52	N80-27072 *
US-PATENT-CLASS-126-419	c 44	N86-27706 *	US-PATENT-CLASS-128-2.1E	c 52	N77-28717 *	US-PATENT-CLASS-128-642	c 52	N81-14612 *
US-PATENT-CLASS-126-422	c 44	N82-18686 *	US-PATENT-CLASS-128-2.1R	c 05	N73-26072 *	US-PATENT-CLASS-128-642	c 52	N81-20703 *
US-PATENT-CLASS-126-429	c 44	N82-18686 *	US-PATENT-CLASS-128-2.1Z	c 35	N76-24525 *	US-PATENT-CLASS-128-660	c 52	N79-26771 *
US-PATENT-CLASS-126-430	c 44	N82-18686 *	US-PATENT-CLASS-128-2.1	c 05	N71-11193 *	US-PATENT-CLASS-128-660	c 52	N83-27578 *
US-PATENT-CLASS-126-434	c 44	N80-20810 *	US-PATENT-CLASS-128-2.1	c 05	N71-12346 *	US-PATENT-CLASS-128-660	c 52	N85-30618 *
US-PATENT-CLASS-126-437	c 44	N80-20810 *	US-PATENT-CLASS-128-2.1	c 05	N71-24729 *	US-PATENT-CLASS-128-663	c 52	N83-27578 *
US-PATENT-CLASS-126-438	c 44	N80-14473 *	US-PATENT-CLASS-128-2.1	c 09	N71-26002 *	US-PATENT-CLASS-128-665	c 52	N81-27783 *
US-PATENT-CLASS-126-438	c 44	N82-16475 *	US-PATENT-CLASS-128-2.1	c 05	N72-25120 *	US-PATENT-CLASS-128-666	c 52	N80-23969 *
US-PATENT-CLASS-126-438	c 44	N84-28203 *	US-PATENT-CLASS-128-2F	c 54	N76-14804 *	US-PATENT-CLASS-128-686	c 52	N82-11770 *
US-PATENT-CLASS-126-438	c 44	N84-28204 *	US-PATENT-CLASS-128-2H	c 52	N76-14757 *	US-PATENT-CLASS-128-690	c 52	N80-23969 *
US-PATENT-CLASS-126-438	c 44	N86-27706 *	US-PATENT-CLASS-128-2H	c 52	N76-29894 *	US-PATENT-CLASS-128-691	c 52	N82-11770 *
US-PATENT-CLASS-126-440	c 44	N84-28204 *	US-PATENT-CLASS-128-2H	c 52	N77-10780 *	US-PATENT-CLASS-128-6	c 52	N80-16725 *
US-PATENT-CLASS-126-442	c 44	N80-14473 *	US-PATENT-CLASS-128-2H	c 52	N77-14736 *	US-PATENT-CLASS-128-736	c 52	N85-30618 *
US-PATENT-CLASS-126-451	c 44	N84-28203 *	US-PATENT-CLASS-128-2N	c 05	N72-25122 *	US-PATENT-CLASS-128-748	c 52	N80-18691 *
US-PATENT-CLASS-126-900	c 44	N85-30474 *	US-PATENT-CLASS-128-2N	c 05	N73-13114 *	US-PATENT-CLASS-128-760	c 52	N80-18690 *
US-PATENT-CLASS-126-901	c 44	N80-16452 *	US-PATENT-CLASS-128-2P	c 52	N76-29894 *	US-PATENT-CLASS-128-760	c 52	N81-29763 *
US-PATENT-CLASS-126-901	c 44	N83-34449 *	US-PATENT-CLASS-128-2R	c 09	N72-22202 *	US-PATENT-CLASS-128-761	c 52	N81-24711 *
US-PATENT-CLASS-126-91A	c 25	N79-11151 *	US-PATENT-CLASS-128-2R	c 52	N79-12894 *	US-PATENT-CLASS-128-774	c 52	N80-27072 *
US-PATENT-CLASS-128-2.06E	c 05	N75-24716 *	US-PATENT-CLASS-128-2S	c 52	N74-10975 *	US-PATENT-CLASS-128-774	c 52	N81-20703 *
US-PATENT-CLASS-128-2.07	c 52	N79-21750 *	US-PATENT-CLASS-128-2S	c 52	N74-27864 *	US-PATENT-CLASS-128-774	c 52	N83-25346 *
US-PATENT-CLASS-128-DIG.12	c 37	N77-28487 *	US-PATENT-CLASS-128-2S	c 33	N75-31329 *	US-PATENT-CLASS-128-778	c 52	N82-22875 *
US-PATENT-CLASS-128-DIG.12	c 51	N81-14605 *	US-PATENT-CLASS-128-2S	c 33	N76-19338 *	US-PATENT-CLASS-128-782	c 52	N80-27072 *
US-PATENT-CLASS-128-DIG.13	c 52	N83-27577 *	US-PATENT-CLASS-128-2S	c 52	N76-29895 *	US-PATENT-CLASS-128-782	c 39	N83-20280 *
US-PATENT-CLASS-128-DIG.16	c 51	N81-14605 *	US-PATENT-CLASS-128-2S	c 52	N76-29896 *	US-PATENT-CLASS-128-782	c 52	N83-25346 *
US-PATENT-CLASS-128-DIG.20	c 52	N76-19785 *	US-PATENT-CLASS-128-2V	c 52	N74-20726 *	US-PATENT-CLASS-128-784	c 52	N82-33996 *
US-PATENT-CLASS-128-DIG.20	c 37	N81-17433 *	US-PATENT-CLASS-128-2V	c 35	N75-12271 *	US-PATENT-CLASS-128-80-E	c 54	N86-22112 *
US-PATENT-CLASS-128-DIG.25	c 52	N81-25660 *	US-PATENT-CLASS-128-2V	c 54	N75-27760 *	US-PATENT-CLASS-128-80F	c 52	N81-25661 *
US-PATENT-CLASS-128-DIG.25	c 52	N84-11744 *	US-PATENT-CLASS-128-2V	c 52	N79-14751 *	US-PATENT-CLASS-128-804	c 52	N82-33996 *
US-PATENT-CLASS-128-DIG.26	c 51	N81-14605 *	US-PATENT-CLASS-128-2V	c 52	N79-18580 *	US-PATENT-CLASS-128-89R	c 52	N81-25662 *
US-PATENT-CLASS-128-DIG.4	c 05	N72-27103 *	US-PATENT-CLASS-128-202.11	c 54	N86-28618 *	US-PATENT-CLASS-128-903	c 52	N80-18691 *
US-PATENT-CLASS-128-DIG.4	c 05	N75-24716 *	US-PATENT-CLASS-128-203	c 54	N76-24900 *	US-PATENT-CLASS-128-92C	c 27	N78-17215 *
US-PATENT-CLASS-128-DIG.4	c 35	N76-24525 *	US-PATENT-CLASS-128-204.18	c 51	N81-14605 *	US-PATENT-CLASS-128-92G	c 27	N78-17215 *
US-PATENT-CLASS-128-DIG.4	c 52	N77-28717 *	US-PATENT-CLASS-128-206F	c 14	N73-24473 *	US-PATENT-CLASS-129-16.7	c 08	N71-15908 *
US-PATENT-CLASS-128-DIG.6	c 51	N81-14605 *	US-PATENT-CLASS-128-207.14	c 51	N81-14605 *	US-PATENT-CLASS-13-20	c 11	N72-23215 *
US-PATENT-CLASS-128-DIG.9	c 52	N80-16725 *	US-PATENT-CLASS-128-207.28	c 51	N81-14605 *	US-PATENT-CLASS-13-20	c 12	N79-26075 *
US-PATENT-CLASS-128-DIG.9	c 51	N81-14605 *	US-PATENT-CLASS-128-212	c 54	N80-10799 *	US-PATENT-CLASS-13-22	c 12	N79-26075 *
US-PATENT-CLASS-128-1.2	c 52	N82-22875 *	US-PATENT-CLASS-128-214D	c 52	N79-14749 *	US-PATENT-CLASS-13-24	c 12	N79-26075 *
US-PATENT-CLASS-128-1A	c 05	N73-32012 *	US-PATENT-CLASS-128-214E	c 52	N74-22771 *	US-PATENT-CLASS-13-26	c 33	N71-15625 *
US-PATENT-CLASS-128-1R	c 54	N84-16803 *	US-PATENT-CLASS-128-214F	c 37	N77-28487 *	US-PATENT-CLASS-13-26	c 14	N71-23267 *
US-PATENT-CLASS-128-1R	c 52	N77-25772 *	US-PATENT-CLASS-128-230	c 52	N75-33640 *	US-PATENT-CLASS-13-31	c 11	N72-23215 *
US-PATENT-CLASS-128-1R	c 52	N77-28716 *	US-PATENT-CLASS-128-236	c 51	N81-14605 *	US-PATENT-CLASS-13-31	c 31	N74-27900 *
US-PATENT-CLASS-128-1R	c 52	N81-25660 *	US-PATENT-CLASS-128-24-A	c 52	N84-34913 *	US-PATENT-CLASS-13-35	c 33	N71-24145 *
US-PATENT-CLASS-128-1R	c 52	N84-11744 *	US-PATENT-CLASS-128-24A	c 05	N73-27062 *	US-PATENT-CLASS-134-137	c 37	N82-12441 *
US-PATENT-CLASS-128-142.2	c 54	N76-24900 *	US-PATENT-CLASS-128-24A	c 54	N75-27760 *	US-PATENT-CLASS-134-17	c 43	N81-26509 *
US-PATENT-CLASS-128-142.5	c 05	N71-11190 *	US-PATENT-CLASS-128-24A	c 05	N71-24738 *	US-PATENT-CLASS-134-21	c 37	N76-18456 *
US-PATENT-CLASS-128-142.5	c 05	N71-11203 *	US-PATENT-CLASS-128-25R	c 37	N74-18127 *	US-PATENT-CLASS-134-37	c 37	N76-18456 *
US-PATENT-CLASS-128-142.5	c 05	N71-17599 *	US-PATENT-CLASS-128-25	c 05	N71-24738 *	US-PATENT-CLASS-134-37	c 37	N85-21652 *
US-PATENT-CLASS-128-142.5	c 05	N72-20096 *	US-PATENT-CLASS-128-26	c 52	N76-19785 *	US-PATENT-CLASS-135-1	c 32	N70-36536 *

US-PATENT-CLASS-136-100R	c 03	N72-20034 *	US-PATENT-CLASS-136-83R	c 03	N72-20034 *	US-PATENT-CLASS-137-483	c 52	N81-25680 *
US-PATENT-CLASS-136-114	c 44	N76-14601 *	US-PATENT-CLASS-136-83R	c 44	N76-18841 *	US-PATENT-CLASS-137-495	c 15	N70-36603 *
US-PATENT-CLASS-136-132	c 03	N71-11053 *	US-PATENT-CLASS-136-83	c 03	N71-28579 *	US-PATENT-CLASS-137-496	c 15	N71-22706 *
US-PATENT-CLASS-136-132	c 03	N71-22974 *	US-PATENT-CLASS-136-86A	c 44	N76-27864 *	US-PATENT-CLASS-137-501	c 34	N78-25351 *
US-PATENT-CLASS-136-133	c 15	N69-24320 *	US-PATENT-CLASS-136-86S	c 44	N76-18841 *	US-PATENT-CLASS-137-505.12	c 14	N71-18625 *
US-PATENT-CLASS-136-133	c 03	N71-23006 *	US-PATENT-CLASS-136-86	c 03	N71-11052 *	US-PATENT-CLASS-137-505.18	c 34	N78-25351 *
US-PATENT-CLASS-136-133	c 03	N72-15986 *	US-PATENT-CLASS-136-86	c 03	N71-20904 *	US-PATENT-CLASS-137-505.25	c 37	N78-25426 *
US-PATENT-CLASS-136-135	c 03	N72-15986 *	US-PATENT-CLASS-136-86	c 03	N71-23022 *	US-PATENT-CLASS-137-505.38	c 37	N75-15050 *
US-PATENT-CLASS-136-143	c 44	N76-28699 *	US-PATENT-CLASS-136-86	c 15	N71-29044 *	US-PATENT-CLASS-137-505.42	c 37	N75-15050 *
US-PATENT-CLASS-136-146	c 03	N69-21337 *	US-PATENT-CLASS-136-86	c 03	N77-31601 *	US-PATENT-CLASS-137-515.3	c 37	N78-14463 *
US-PATENT-CLASS-136-146	c 24	N76-14204 *	US-PATENT-CLASS-136-86	c 03	N79-25482 *	US-PATENT-CLASS-137-516.27	c 15	N73-30459 *
US-PATENT-CLASS-136-146	c 24	N76-14204 *	US-PATENT-CLASS-136-89CA	c 44	N78-25527 *	US-PATENT-CLASS-137-535	c 15	N73-30459 *
US-PATENT-CLASS-136-148	c 44	N82-24645 *	US-PATENT-CLASS-136-89CC	c 44	N78-25529 *	US-PATENT-CLASS-137-535	c 05	N73-32014 *
US-PATENT-CLASS-136-182	c 44	N76-14801 *	US-PATENT-CLASS-136-89CC	c 44	N79-11487 *	US-PATENT-CLASS-137-538	c 05	N73-25125 *
US-PATENT-CLASS-136-186	c 03	N71-23336 *	US-PATENT-CLASS-136-89CC	c 44	N79-17314 *	US-PATENT-CLASS-137-539	c 15	N70-18181 *
US-PATENT-CLASS-136-186	c 03	N72-20032 *	US-PATENT-CLASS-136-89CC	c 44	N79-25482 *	US-PATENT-CLASS-137-549	c 37	N81-17433 *
US-PATENT-CLASS-136-170	c 03	N71-11051 *	US-PATENT-CLASS-136-89CC	c 44	N79-25482 *	US-PATENT-CLASS-137-550	c 09	N71-23191 *
US-PATENT-CLASS-136-175	c 03	N72-20034 *	US-PATENT-CLASS-136-89CC	c 44	N78-25529 *	US-PATENT-CLASS-137-554	c 11	N73-12295 *
US-PATENT-CLASS-136-179	c 03	N70-41864 *	US-PATENT-CLASS-136-89CC	c 44	N79-25482 *	US-PATENT-CLASS-137-574	c 20	N80-10278 *
US-PATENT-CLASS-136-182	c 03	N71-10728 *	US-PATENT-CLASS-136-89CC	c 44	N79-25482 *	US-PATENT-CLASS-137-576	c 20	N80-10278 *
US-PATENT-CLASS-136-182	c 03	N71-20407 *	US-PATENT-CLASS-136-89H	c 44	N78-25529 *	US-PATENT-CLASS-137-582	c 32	N71-16103 *
US-PATENT-CLASS-136-182	c 03	N71-20491 *	US-PATENT-CLASS-136-89H	c 44	N78-25529 *	US-PATENT-CLASS-137-582	c 32	N71-16108 *
US-PATENT-CLASS-136-182	c 44	N74-27519 *	US-PATENT-CLASS-136-89H	c 44	N78-25529 *	US-PATENT-CLASS-137-582	c 15	N71-19589 *
US-PATENT-CLASS-136-182	c 44	N76-14801 *	US-PATENT-CLASS-136-89H	c 44	N78-25529 *	US-PATENT-CLASS-137-582	c 15	N73-26472 *
US-PATENT-CLASS-136-202	c 09	N72-12136 *	US-PATENT-CLASS-136-89H	c 44	N78-25529 *	US-PATENT-CLASS-137-590	c 20	N80-10278 *
US-PATENT-CLASS-136-202	c 03	N72-26031 *	US-PATENT-CLASS-136-89H	c 44	N80-14474 *	US-PATENT-CLASS-137-594	c 12	N71-18815 *
US-PATENT-CLASS-136-202	c 44	N76-18612 *	US-PATENT-CLASS-136-89H	c 44	N78-24809 *	US-PATENT-CLASS-137-604	c 15	N73-27406 *
US-PATENT-CLASS-136-202	c 35	N77-32454 *	US-PATENT-CLASS-136-89H	c 44	N80-24741 *	US-PATENT-CLASS-137-608	c 15	N73-13462 *
US-PATENT-CLASS-136-206	c 35	N79-14346 *	US-PATENT-CLASS-136-89H	c 44	N78-13526 *	US-PATENT-CLASS-137-614.06	c 37	N79-11402 *
US-PATENT-CLASS-136-206	c 03	N72-11062 *	US-PATENT-CLASS-136-89H	c 44	N79-11467 *	US-PATENT-CLASS-137-614	c 15	N70-36492 *
US-PATENT-CLASS-136-206	c 09	N72-12136 *	US-PATENT-CLASS-136-89H	c 44	N79-14528 *	US-PATENT-CLASS-137-615	c 12	N71-16031 *
US-PATENT-CLASS-136-206	c 44	N76-14595 *	US-PATENT-CLASS-136-89H	c 44	N79-25482 *	US-PATENT-CLASS-137-624.11	c 35	N78-19466 *
US-PATENT-CLASS-136-206	c 44	N76-31666 *	US-PATENT-CLASS-136-89H	c 44	N69-24267 *	US-PATENT-CLASS-137-624.14	c 03	N69-21469 *
US-PATENT-CLASS-136-210	c 44	N74-19693 *	US-PATENT-CLASS-136-89H	c 44	N71-11049 *	US-PATENT-CLASS-137-625.38	c 37	N78-25426 *
US-PATENT-CLASS-136-211	c 35	N76-15434 *	US-PATENT-CLASS-136-89H	c 03	N71-11050 *	US-PATENT-CLASS-137-625.3	c 37	N78-25426 *
US-PATENT-CLASS-136-212	c 35	N76-15434 *	US-PATENT-CLASS-136-89H	c 03	N71-11056 *	US-PATENT-CLASS-137-625.4	c 37	N80-23654 *
US-PATENT-CLASS-136-213	c 14	N69-27459 *	US-PATENT-CLASS-136-89H	c 03	N71-18998 *	US-PATENT-CLASS-137-625.69	c 15	N70-36906 *
US-PATENT-CLASS-136-213	c 34	N74-27861 *	US-PATENT-CLASS-136-89H	c 03	N71-19545 *	US-PATENT-CLASS-137-628	c 37	N74-21065 *
US-PATENT-CLASS-136-224	c 14	N73-12447 *	US-PATENT-CLASS-136-89H	c 03	N71-20492 *	US-PATENT-CLASS-137-637.05	c 37	N78-11402 *
US-PATENT-CLASS-136-225	c 14	N73-24472 *	US-PATENT-CLASS-136-89H	c 03	N71-20895 *	US-PATENT-CLASS-137-81.5	c 12	N69-21466 *
US-PATENT-CLASS-136-225	c 35	N76-15434 *	US-PATENT-CLASS-136-89H	c 26	N71-23043 *	US-PATENT-CLASS-137-81.5	c 15	N71-15809 *
US-PATENT-CLASS-136-225	c 44	N85-21768 *	US-PATENT-CLASS-136-89H	c 03	N71-23187 *	US-PATENT-CLASS-137-81.5	c 12	N71-17578 *
US-PATENT-CLASS-136-227	c 09	N72-12136 *	US-PATENT-CLASS-136-89H	c 03	N71-23449 *	US-PATENT-CLASS-137-81.5	c 12	N71-17579 *
US-PATENT-CLASS-136-228	c 33	N71-15568 *	US-PATENT-CLASS-136-89H	c 03	N71-33409 *	US-PATENT-CLASS-137-81.5	c 10	N71-25899 *
US-PATENT-CLASS-136-230	c 14	N71-23039 *	US-PATENT-CLASS-136-89H	c 03	N72-20031 *	US-PATENT-CLASS-137-81.5	c 12	N71-27332 *
US-PATENT-CLASS-136-230	c 34	N74-27861 *	US-PATENT-CLASS-136-89H	c 03	N72-22042 *	US-PATENT-CLASS-137-81.5	c 12	N71-28741 *
US-PATENT-CLASS-136-232	c 35	N77-14409 *	US-PATENT-CLASS-136-89H	c 03	N72-22874 *	US-PATENT-CLASS-137-81.5	c 28	N72-22772 *
US-PATENT-CLASS-136-233	c 14	N72-27410 *	US-PATENT-CLASS-136-89H	c 03	N72-24037 *	US-PATENT-CLASS-137-81.5	c 15	N72-33477 *
US-PATENT-CLASS-136-233	c 14	N73-13417 *	US-PATENT-CLASS-136-89H	c 03	N72-25259 *	US-PATENT-CLASS-137-81.5	c 15	N73-13462 *
US-PATENT-CLASS-136-233	c 34	N74-27861 *	US-PATENT-CLASS-136-89H	c 03	N72-27053 *	US-PATENT-CLASS-137-81.5	c 28	N73-13773 *
US-PATENT-CLASS-136-233	c 35	N77-14409 *	US-PATENT-CLASS-136-89H	c 03	N73-32109 *	US-PATENT-CLASS-137-819	c 33	N74-11050 *
US-PATENT-CLASS-136-236R	c 35	N77-32454 *	US-PATENT-CLASS-136-89H	c 44	N74-14784 *	US-PATENT-CLASS-137-81	c 05	N72-20097 *
US-PATENT-CLASS-136-236	c 35	N79-14346 *	US-PATENT-CLASS-136-89H	c 44	N76-14600 *	US-PATENT-CLASS-137-81	c 14	N73-13418 *
US-PATENT-CLASS-136-240	c 35	N77-32454 *	US-PATENT-CLASS-136-89H	c 44	N76-28835 *	US-PATENT-CLASS-137-833	c 33	N74-11050 *
US-PATENT-CLASS-136-248	c 44	N85-21768 *	US-PATENT-CLASS-136-89H	c 44	N77-31666 *	US-PATENT-CLASS-137-838	c 71	N84-28568 *
US-PATENT-CLASS-136-249	c 44	N81-12542 *	US-PATENT-CLASS-136-89H	c 44	N77-10835 *	US-PATENT-CLASS-137-840	c 33	N74-11050 *
US-PATENT-CLASS-136-249	c 44	N82-29709 *	US-PATENT-CLASS-136-89H	c 44	N77-19571 *	US-PATENT-CLASS-137-886	c 37	N81-17433 *
US-PATENT-CLASS-136-249	c 44	N82-31764 *	US-PATENT-CLASS-136-89H	c 44	N78-14680 *	US-PATENT-CLASS-137-887	c 37	N81-17433 *
US-PATENT-CLASS-136-249	c 44	N83-32177 *	US-PATENT-CLASS-136-89H	c 44	N78-14681 *	US-PATENT-CLASS-137-89	c 37	N85-34403 *
US-PATENT-CLASS-136-24	c 09	N73-32108 *	US-PATENT-CLASS-136-89H	c 44	N76-24900 *	US-PATENT-CLASS-138.8R	c 27	N81-15104 *
US-PATENT-CLASS-136-253	c 44	N85-34441 *	US-PATENT-CLASS-136-89H	c 07	N77-23106 *	US-PATENT-CLASS-138-103	c 52	N80-16725 *
US-PATENT-CLASS-136-255	c 44	N81-29525 *	US-PATENT-CLASS-137-101	c 37	N78-10467 *	US-PATENT-CLASS-138-113	c 34	N75-12222 *
US-PATENT-CLASS-136-255	c 44	N83-14692 *	US-PATENT-CLASS-137-110	c 54	N76-24900 *	US-PATENT-CLASS-138-114	c 34	N75-12222 *
US-PATENT-CLASS-136-255	c 33	N85-21492 *	US-PATENT-CLASS-137-116.3	c 37	N85-34403 *	US-PATENT-CLASS-138-119	c 32	N70-41579 *
US-PATENT-CLASS-136-255	c 44	N85-30475 *	US-PATENT-CLASS-137-13	c 15	N71-15987 *	US-PATENT-CLASS-138-120	c 54	N86-28619 *
US-PATENT-CLASS-136-255	c 76	N86-20150 *	US-PATENT-CLASS-137-13	c 15	N72-33477 *	US-PATENT-CLASS-138-120	c 54	N86-28620 *
US-PATENT-CLASS-136-256	c 44	N83-13579 *	US-PATENT-CLASS-137-14	c 15	N79-33468 *	US-PATENT-CLASS-138-120	c 54	N86-29507 *
US-PATENT-CLASS-136-256	c 44	N83-14692 *	US-PATENT-CLASS-137-15.1	c 02	N74-20646 *	US-PATENT-CLASS-138-133	c 52	N80-16725 *
US-PATENT-CLASS-136-256	c 44	N85-20530 *	US-PATENT-CLASS-137-15.1	c 07	N74-31270 *	US-PATENT-CLASS-138-148	c 34	N75-12222 *
US-PATENT-CLASS-136-258	c 44	N85-30475 *	US-PATENT-CLASS-137-15.1	c 07	N75-24736 *	US-PATENT-CLASS-138-178	c 15	N72-20445 *
US-PATENT-CLASS-136-258	c 44	N81-19558 *	US-PATENT-CLASS-137-15.1	c 07	N77-18154 *	US-PATENT-CLASS-138-33	c 52	N80-16725 *
US-PATENT-CLASS-136-258	c 44	N81-29525 *	US-PATENT-CLASS-137-15.1	c 07	N79-14096 *	US-PATENT-CLASS-138-42	c 15	N71-15608 *
US-PATENT-CLASS-136-259	c 44	N83-13579 *	US-PATENT-CLASS-137-15.1	c 07	N79-24976 *	US-PATENT-CLASS-138-42	c 44	N84-14583 *
US-PATENT-CLASS-136-259	c 44	N83-14692 *	US-PATENT-CLASS-137-15.1	c 07	N81-14999 *	US-PATENT-CLASS-138-43	c 15	N71-19213 *
US-PATENT-CLASS-136-261	c 44	N82-26777 *	US-PATENT-CLASS-137-15.1	c 05	N74-20646 *	US-PATENT-CLASS-138-45	c 15	N71-18580 *
US-PATENT-CLASS-136-261	c 44	N85-30475 *	US-PATENT-CLASS-137-15.2	c 07	N76-14431 *	US-PATENT-CLASS-138-45	c 15	N73-13462 *
US-PATENT-CLASS-136-261	c 44	N86-32875 *	US-PATENT-CLASS-137-15.2	c 35	N73-27406 *	US-PATENT-CLASS-138-48	c 12	N71-18615 *
US-PATENT-CLASS-136-262	c 44	N81-29525 *	US-PATENT-CLASS-137-154	c 15	N70-41646 *	US-PATENT-CLASS-138-48	c 15	N71-18580 *
US-PATENT-CLASS-136-262	c 76	N86-20150 *	US-PATENT-CLASS-137-177	c 20	N78-12390 *	US-PATENT-CLASS-138-96R	c 37	N79-22474 *
US-PATENT-CLASS-136-28	c 03	N71-10608 *	US-PATENT-CLASS-137-197	c 35	N70-38997 *	US-PATENT-CLASS-138-97	c 37	N86-32736 *
US-PATENT-CLASS-136-290	c 44	N82-26777 *	US-PATENT-CLASS-137-197	c 12	N77-30399 *	US-PATENT-CLASS-139-425R	c 28	N72-11708 *
US-PATENT-CLASS-136-291	c 44	N81-12542 *	US-PATENT-CLASS-137-207	c 15	N77-30399 *	US-PATENT-CLASS-140-105	c 15	N72-12408 *
US-PATENT-CLASS-136-30	c 44	N74-19693 *	US-PATENT-CLASS-137-209	c 20	N80-10278 *	US-PATENT-CLASS-140-123	c 15	N71-15918 *
US-PATENT-CLASS-136-30	c 44	N76-18643 *	US-PATENT-CLASS-137-340	c 15	N70-34817 *	US-PATENT-CLASS-141-197	c 35	N78-10428 *
US-PATENT-CLASS-136-30	c 44	N76-29699 *	US-PATENT-CLASS-137-341	c 15	N70-35087 *	US-PATENT-CLASS-141-198	c 25	N86-27431 *
US-PATENT-CLASS-136-36	c 44	N74-19692 *	US-PATENT-CLASS-137-341	c 12	N71-17661 *	US-PATENT-CLASS-141-258	c 14	N71-27005 *
US-PATENT-CLASS-136-6LF	c 44	N76-18643 *	US-PATENT-CLASS-137-375	c 37	N80-23654 *	US-PATENT-CLASS-141-4	c 35	N78-10428 *
US-PATENT-CLASS-136-6	c 03	N72-15986 *	US-PATENT-CLASS-137-397	c 15	N73-26472 *	US-PATENT-CLASS-141-5	c 33	N71-20834 *
US-PATENT-CLASS-136-6	c 44	N82-24641 *	US-PATENT-CLASS-137-469	c 05	N72-20097 *	US-PATENT-CLASS-141-91	c 12	N71-21089 *
US-PATENT-CLASS-136-6	c 44	N82-24642 *	US-PATENT-CLASS-137-484.2	c 34	N78-25351 *	US-PATENT-CLASS-148-DIG.26	c 76	N85-30922 *
US-PATENT-CLASS-136-6	c 44	N82-24643 *	US-PATENT-CLASS-137-487.5	c 14	N73-13418 *	US-PATENT-CLASS-148-1.5	c 26	N71-10607 *
US-PATENT-CLASS-136-6	c 44	N82-24644 *	US-PATENT-CLASS-137-491	c 15	N69-21924 *	US-PATENT-CLASS-148-1.5	c 26	N71-23654 *
US-PATENT-CLASS-136-79	c 03	N72-20032 *						
US-PATENT-CLASS-136-81	c 03	N72-20032 *						

US-PATENT-CLASS-148-1.5	c 76	N74-20329 *	#	US-PATENT-CLASS-149-83	c 20	N78-32179 *	#	US-PATENT-CLASS-156-285	c 24	N80-26388 *	#
US-PATENT-CLASS-148-1.5	c 44	N80-29835 *	#	US-PATENT-CLASS-149-85	c 20	N78-32179 *	#	US-PATENT-CLASS-156-285	c 24	N81-29163 *	#
US-PATENT-CLASS-148-1.5	c 33	N81-26360 *	#	US-PATENT-CLASS-149-88	c 28	N78-31255 *	#	US-PATENT-CLASS-156-285	c 24	N81-33235 *	#
US-PATENT-CLASS-148-1.5	c 44	N82-26777 *	#	US-PATENT-CLASS-149-92	c 27	N72-25699 *	#	US-PATENT-CLASS-156-285	c 32	N84-28389 *	#
US-PATENT-CLASS-148-1.5	c 44	N82-29709 *	#	US-PATENT-CLASS-149-92	c 28	N78-31255 *	#	US-PATENT-CLASS-156-286	c 37	N76-21554 *	#
US-PATENT-CLASS-148-1.5	c 44	N86-32875 *	#	US-PATENT-CLASS-149-93	c 28	N78-31255 *	#	US-PATENT-CLASS-156-286	c 37	N76-24575 *	#
US-PATENT-CLASS-148-1.5	c 44	N73-13465 *	#	US-PATENT-CLASS-15-143	c 15	N72-11390 *	#	US-PATENT-CLASS-156-286	c 24	N78-17150 *	#
US-PATENT-CLASS-148-11.5R	c 15	N79-22271 *	#	US-PATENT-CLASS-15-210	c 15	N72-11390 *	#	US-PATENT-CLASS-156-289	c 24	N78-17149 *	#
US-PATENT-CLASS-148-12.4	c 26	N78-24333 *	#	US-PATENT-CLASS-15-230.16	c 37	N79-10422 *	#	US-PATENT-CLASS-156-289	c 24	N78-17150 *	#
US-PATENT-CLASS-148-12.7A	c 26	N77-20201 *	#	US-PATENT-CLASS-15-230.17	c 37	N79-10422 *	#	US-PATENT-CLASS-156-289	c 52	N84-28389 *	#
US-PATENT-CLASS-148-12.7N	c 26	N79-22271 *	#	US-PATENT-CLASS-15-406	c 37	N85-21652 *	#	US-PATENT-CLASS-156-290	c 24	N81-33235 *	#
US-PATENT-CLASS-148-12F	c 26	N79-16678 *	#	US-PATENT-CLASS-15-415	c 14	N73-30395 *	#	US-PATENT-CLASS-156-292	c 27	N80-32516 *	#
US-PATENT-CLASS-148-121	c 76	N78-24333 *	#	US-PATENT-CLASS-150-11	c 37	N81-14317 *	#	US-PATENT-CLASS-156-292	c 24	N81-17170 *	#
US-PATENT-CLASS-148-125	c 26	N71-24142 *	#	US-PATENT-CLASS-150-1	c 52	N79-14749 *	#	US-PATENT-CLASS-156-294	c 37	N81-14317 *	#
US-PATENT-CLASS-148-126	c 17	N71-26153 *	#	US-PATENT-CLASS-151-41.76	c 37	N80-23653 *	#	US-PATENT-CLASS-156-294	c 24	N81-29163 *	#
US-PATENT-CLASS-148-126	c 18	N71-28729 *	#	US-PATENT-CLASS-152-11	c 31	N71-18611 *	#	US-PATENT-CLASS-156-294	c 35	N84-12443 *	#
US-PATENT-CLASS-148-126	c 26	N74-10521 *	#	US-PATENT-CLASS-152-225	c 15	N71-27091 *	#	US-PATENT-CLASS-156-295	c 27	N81-14077 *	#
US-PATENT-CLASS-148-127	c 26	N75-29236 *	#	US-PATENT-CLASS-152-250	c 15	N71-27091 *	#	US-PATENT-CLASS-156-300	c 24	N78-17150 *	#
US-PATENT-CLASS-148-131	c 26	N80-28492 *	#	US-PATENT-CLASS-152-300RF	c 37	N81-24443 *	#	US-PATENT-CLASS-156-303	c 44	N80-18550 *	#
US-PATENT-CLASS-148-13	c 14	N71-25892 *	#	US-PATENT-CLASS-152-353G	c 37	N81-24443 *	#	US-PATENT-CLASS-156-304.3	c 27	N84-22748 *	#
US-PATENT-CLASS-148-162	c 26	N77-20201 *	#	US-PATENT-CLASS-152-353R	c 37	N81-24443 *	#	US-PATENT-CLASS-156-306	c 27	N84-22748 *	#
US-PATENT-CLASS-148-173	c 76	N83-20789 *	#	US-PATENT-CLASS-152-379.4	c 37	N81-24443 *	#	US-PATENT-CLASS-156-306	c 24	N78-17150 *	#
US-PATENT-CLASS-148-174	c 26	N71-29156 *	#	US-PATENT-CLASS-156.307.7	c 27	N82-11206 *	#	US-PATENT-CLASS-156-307.3	c 27	N82-11206 *	#
US-PATENT-CLASS-148-174	c 44	N76-28635 *	#	US-PATENT-CLASS-156-DIG.6.8	c 76	N79-23798 *	#	US-PATENT-CLASS-156-307.5	c 27	N82-11206 *	#
US-PATENT-CLASS-148-174	c 44	N78-24609 *	#	US-PATENT-CLASS-156-DIG.62	c 76	N77-32919 *	#	US-PATENT-CLASS-156-307	c 27	N86-20561 *	#
US-PATENT-CLASS-148-174	c 76	N85-30922 *	#	US-PATENT-CLASS-156-DIG.62	c 35	N83-24828 *	#	US-PATENT-CLASS-156-308	c 05	N72-25121 *	#
US-PATENT-CLASS-148-175	c 25	N75-26043 *	#	US-PATENT-CLASS-156-DIG.64	c 33	N85-29142 *	#	US-PATENT-CLASS-156-309.9	c 27	N86-20561 *	#
US-PATENT-CLASS-148-175	c 76	N76-25049 *	#	US-PATENT-CLASS-156-DIG.64	c 76	N79-11920 *	#	US-PATENT-CLASS-156-309	c 31	N74-18089 *	#
US-PATENT-CLASS-148-175	c 44	N76-28635 *	#	US-PATENT-CLASS-156-DIG.64	c 44	N80-24741 *	#	US-PATENT-CLASS-156-309	c 27	N78-17205 *	#
US-PATENT-CLASS-148-175	c 44	N82-28780 *	#	US-PATENT-CLASS-156-DIG.64	c 76	N80-32245 *	#	US-PATENT-CLASS-156-311	c 24	N78-17150 *	#
US-PATENT-CLASS-148-175	c 76	N83-20789 *	#	US-PATENT-CLASS-156-DIG.64	c 76	N84-35113 *	#	US-PATENT-CLASS-156-312	c 44	N80-18550 *	#
US-PATENT-CLASS-148-175	c 76	N85-30922 *	#	US-PATENT-CLASS-156-DIG.65	c 76	N79-11920 *	#	US-PATENT-CLASS-156-315	c 27	N82-24340 *	#
US-PATENT-CLASS-148-187	c 26	N72-17820 *	#	US-PATENT-CLASS-156-DIG.65	c 76	N85-30922 *	#	US-PATENT-CLASS-156-320	c 15	N72-11392 *	#
US-PATENT-CLASS-148-187	c 14	N72-28438 *	#	US-PATENT-CLASS-156-DIG.6	c 76	N83-35888 *	#	US-PATENT-CLASS-156-323	c 27	N81-14077 *	#
US-PATENT-CLASS-148-187	c 33	N81-26360 *	#	US-PATENT-CLASS-156-DIG.73	c 76	N83-35888 *	#	US-PATENT-CLASS-156-329	c 27	N82-29456 *	#
US-PATENT-CLASS-148-188	c 24	N71-10560 *	#	US-PATENT-CLASS-156-DIG.73	c 27	N83-36220 *	#	US-PATENT-CLASS-156-330	c 24	N81-14000 *	#
US-PATENT-CLASS-148-188	c 09	N71-12513 *	#	US-PATENT-CLASS-156-DIG.88	c 76	N79-11920 *	#	US-PATENT-CLASS-156-331.5	c 27	N82-11206 *	#
US-PATENT-CLASS-148-188	c 44	N79-11468 *	#	US-PATENT-CLASS-156-DIG.88	c 76	N80-32245 *	#	US-PATENT-CLASS-156-331.5	c 27	N86-20561 *	#
US-PATENT-CLASS-148-20.3	c 26	N77-20201 *	#	US-PATENT-CLASS-156-DIG.88	c 76	N84-35113 *	#	US-PATENT-CLASS-156-331	c 37	N74-18126 *	#
US-PATENT-CLASS-148-2	c 26	N77-20201 *	#	US-PATENT-CLASS-156-DIG.88	c 76	N85-30922 *	#	US-PATENT-CLASS-156-331	c 27	N78-17205 *	#
US-PATENT-CLASS-148-2	c 26	N79-22271 *	#	US-PATENT-CLASS-156-DIG.88	c 76	N86-28760 *	#	US-PATENT-CLASS-156-331	c 24	N79-16915 *	#
US-PATENT-CLASS-148-32	c 26	N78-18183 *	#	US-PATENT-CLASS-156-DIG.88	c 27	N83-36220 *	#	US-PATENT-CLASS-156-331	c 27	N81-14077 *	#
US-PATENT-CLASS-148-32.5	c 17	N72-22535 *	#	US-PATENT-CLASS-156-DIG.96	c 76	N80-32244 *	#	US-PATENT-CLASS-156-338	c 27	N82-24340 *	#
US-PATENT-CLASS-148-32.5	c 26	N77-20201 *	#	US-PATENT-CLASS-156-DIG.96	c 33	N81-19389 *	#	US-PATENT-CLASS-156-344	c 28	N81-14103 *	#
US-PATENT-CLASS-148-32.5	c 26	N77-32280 *	#	US-PATENT-CLASS-156-DIG.98	c 76	N84-35113 *	#	US-PATENT-CLASS-156-344	c 31	N83-34073 *	#
US-PATENT-CLASS-148-32.5	c 26	N78-18183 *	#	US-PATENT-CLASS-156-104	c 44	N80-18550 *	#	US-PATENT-CLASS-156-345	c 15	N70-42033 *	#
US-PATENT-CLASS-148-32	c 26	N77-32279 *	#	US-PATENT-CLASS-156-154	c 24	N78-17150 *	#	US-PATENT-CLASS-156-379.7	c 33	N82-26571 *	#
US-PATENT-CLASS-148-32	c 26	N80-23419 *	#	US-PATENT-CLASS-156-154	c 27	N81-14077 *	#	US-PATENT-CLASS-156-380.2	c 31	N85-29083 *	#
US-PATENT-CLASS-148-32.2	c 76	N85-30922 *	#	US-PATENT-CLASS-156-157	c 33	N82-26571 *	#	US-PATENT-CLASS-156-382	c 37	N76-21554 *	#
US-PATENT-CLASS-148-428	c 26	N82-31505 *	#	US-PATENT-CLASS-156-160	c 27	N81-14077 *	#	US-PATENT-CLASS-156-382	c 52	N84-28389 *	#
US-PATENT-CLASS-148-6.11	c 15	N71-24875 *	#	US-PATENT-CLASS-156-161	c 24	N81-29163 *	#	US-PATENT-CLASS-156-391	c 35	N84-12443 *	#
US-PATENT-CLASS-148-6.16	c 18	N71-23047 *	#	US-PATENT-CLASS-156-163	c 27	N81-14077 *	#	US-PATENT-CLASS-156-3	c 17	N71-16044 *	#
US-PATENT-CLASS-148-6.20	c 17	N71-23828 *	#	US-PATENT-CLASS-156-165	c 24	N81-29163 *	#	US-PATENT-CLASS-156-3	c 15	N71-21404 *	#
US-PATENT-CLASS-148-6.3	c 17	N71-33408 *	#	US-PATENT-CLASS-156-166	c 74	N85-29749 *	#	US-PATENT-CLASS-156-3	c 15	N71-24047 *	#
US-PATENT-CLASS-148-6.3	c 44	N79-18444 *	#	US-PATENT-CLASS-156-16	c 74	N75-12732 *	#	US-PATENT-CLASS-156-3	c 06	N72-21094 *	#
US-PATENT-CLASS-148-6	c 18	N71-29040 *	#	US-PATENT-CLASS-156-172	c 15	N71-17651 *	#	US-PATENT-CLASS-156-423	c 35	N84-12443 *	#
US-PATENT-CLASS-148-6	c 76	N79-16678 *	#	US-PATENT-CLASS-156-17	c 76	N79-21910 *	#	US-PATENT-CLASS-156-499	c 27	N82-22748 *	#
US-PATENT-CLASS-149-105	c 28	N78-31255 *	#	US-PATENT-CLASS-156-18	c 26	N73-26752 *	#	US-PATENT-CLASS-156-510	c 15	N71-17687 *	#
US-PATENT-CLASS-149-108.4	c 28	N80-23471 *	#	US-PATENT-CLASS-156-18	c 74	N75-12732 *	#	US-PATENT-CLASS-156-510	c 03	N72-25019 *	#
US-PATENT-CLASS-149-108.4	c 28	N81-15119 *	#	US-PATENT-CLASS-156-191	c 52	N84-28389 *	#	US-PATENT-CLASS-156-52	c 31	N79-21226 *	#
US-PATENT-CLASS-149-109	c 27	N70-41897 *	#	US-PATENT-CLASS-156-212	c 03	N71-26726 *	#	US-PATENT-CLASS-156-540	c 35	N84-12443 *	#
US-PATENT-CLASS-149-111	c 28	N78-31255 *	#	US-PATENT-CLASS-156-212	c 24	N80-26388 *	#	US-PATENT-CLASS-156-545	c 15	N71-24164 *	#
US-PATENT-CLASS-149-15	c 44	N80-20808 *	#	US-PATENT-CLASS-156-212	c 27	N81-14077 *	#	US-PATENT-CLASS-156-556	c 37	N76-21554 *	#
US-PATENT-CLASS-149-17	c 28	N74-33209 *	#	US-PATENT-CLASS-156-213	c 24	N80-26388 *	#	US-PATENT-CLASS-156-59	c 31	N83-34073 *	#
US-PATENT-CLASS-149-19.2	c 28	N80-28536 *	#	US-PATENT-CLASS-156-215	c 35	N84-12443 *	#	US-PATENT-CLASS-156-600	c 27	N83-36220 *	#
US-PATENT-CLASS-149-19.4	c 28	N78-31255 *	#	US-PATENT-CLASS-156-218	c 54	N74-32546 *	#	US-PATENT-CLASS-156-601	c 76	N77-32919 *	#
US-PATENT-CLASS-149-19.4	c 20	N78-32179 *	#	US-PATENT-CLASS-156-229	c 24	N77-28225 *	#	US-PATENT-CLASS-156-601	c 76	N80-32245 *	#
US-PATENT-CLASS-149-19.4	c 28	N79-28342 *	#	US-PATENT-CLASS-156-230	c 35	N84-12443 *	#	US-PATENT-CLASS-156-602	c 76	N82-30105 *	#
US-PATENT-CLASS-149-19.8	c 28	N78-31255 *	#	US-PATENT-CLASS-156-235	c 35	N84-12443 *	#	US-PATENT-CLASS-156-605	c 44	N80-24741 *	#
US-PATENT-CLASS-149-19.2	c 28	N79-14228 *	#	US-PATENT-CLASS-156-242	c 15	N69-24322 *	#	US-PATENT-CLASS-156-608	c 76	N79-11920 *	#
US-PATENT-CLASS-149-19.9	c 28	N79-14228 *	#	US-PATENT-CLASS-156-242	c 37	N76-24575 *	#	US-PATENT-CLASS-156-608	c 33	N81-19389 *	#
US-PATENT-CLASS-149-19.9	c 28	N79-28342 *	#	US-PATENT-CLASS-156-242	c 24	N81-33235 *	#	US-PATENT-CLASS-156-608	c 76	N82-30105 *	#
US-PATENT-CLASS-149-19.9	c 28	N80-28536 *	#	US-PATENT-CLASS-156-245	c 31	N74-18089 *	#	US-PATENT-CLASS-156-608	c 76	N83-20789 *	#
US-PATENT-CLASS-149-19	c 27	N71-14090 *	#	US-PATENT-CLASS-156-245	c 24	N78-17149 *	#	US-PATENT-CLASS-156-608	c 76	N83-35888 *	#
US-PATENT-CLASS-149-19	c 27	N72-25699 *	#	US-PATENT-CLASS-156-245	c 24	N81-33235 *	#	US-PATENT-CLASS-156-608	c 76	N84-35113 *	#
US-PATENT-CLASS-149-19	c 27	N73-16764 *	#	US-PATENT-CLASS-156-247	c 31	N74-18089 *	#	US-PATENT-CLASS-156-60	c 15	N71-22713 *	#
US-PATENT-CLASS-149-1	c 23	N71-16212 *	#	US-PATENT-CLASS-156-250	c 03	N72-25019 *	#	US-PATENT-CLASS-156-610	c 76	N76-25049 *	#
US-PATENT-CLASS-149-1	c 06	N73-30097 *	#	US-PATENT-CLASS-156-252	c 24	N81-33235 *	#	US-PATENT-CLASS-156-610	c 27	N83-36220 *	#
US-PATENT-CLASS-149-1	c 28	N80-20402 *	#	US-PATENT-CLASS-156-264	c 05	N72-25121 *	#	US-PATENT-CLASS-156-610	c 76	N86-28760 *	#
US-PATENT-CLASS-149-1	c 28	N81-14103 *	#	US-PATENT-CLASS-156-264	c 24	N78-17150 *	#	US-PATENT-CLASS-156-612	c 76	N76-25049 *	#
US-PATENT-CLASS-149-20	c 27	N72-25699 *	#	US-PATENT-CLASS-156-264	c 24	N81-33235 *	#	US-PATENT-CLASS-156-612	c 44	N76-28635 *	#
US-PATENT-CLASS-149-20	c 28	N79-14228 *	#	US-PATENT-CLASS-156-267	c 31	N83-34073 *	#	US-PATENT-CLASS-156-612	c 76	N85-30922 *	#
US-PATENT-CLASS-149-20	c 28	N79-28342 *	#	US-PATENT-CLASS-156-272.4	c 27	N81-14077 *	#	US-PATENT-CLASS-156-613	c 76	N76-25049 *	#
US-PATENT-CLASS-149-20	c 28	N80-28536 *	#	US-PATENT-CLASS-156-272	c 33	N85-29083 *	#	US-PATENT-CLASS-156-613	c 44	N76-28635 *	#
US-PATENT-CLASS-149-2	c 12	N70-40124 *	#	US-PATENT-CLASS-156-272	c 27	N80-32516 *	#	US-PATENT-CLASS-156-617-SP	c 76	N84-35113 *	#
US-PATENT-CLASS-149-36	c 27	N72-25699 *	#	US-PATENT-CLASS-156-273.7	c 27	N82-26571 *	#	US-PATENT-CLASS-156-617-V	c 76	N84-35113 *	#
US-PATENT-CLASS-149-36	c 27	N73-16764 *	#	US-PATENT-CLASS-156-273.9	c 31	N85-29083 *	#	US-PATENT-CLASS-156-617SP	c 76	N79-1	

US-PATENT-CLASS-158-630	c 35	N84-22930 *	US-PATENT-CLASS-165-105	c 34	N78-17337 *	US-PATENT-CLASS-169-28	c 12	N72-21310 *
US-PATENT-CLASS-158-633	c 44	N78-25529 *	US-PATENT-CLASS-165-105	c 44	N79-18443 *	US-PATENT-CLASS-169-36	c 12	N72-21310 *
US-PATENT-CLASS-158-635	c 76	N83-20789 *	US-PATENT-CLASS-165-105	c 37	N79-28549 *	US-PATENT-CLASS-169-47	c 25	N83-36118 *
US-PATENT-CLASS-158-643	c 52	N84-23095 *	US-PATENT-CLASS-165-105	c 34	N79-31523 *	US-PATENT-CLASS-169-62	c 31	N81-14137 *
US-PATENT-CLASS-158-644	c 52	N84-23095 *	US-PATENT-CLASS-165-105	c 35	N81-14287 *	US-PATENT-CLASS-169-70	c 31	N81-14137 *
US-PATENT-CLASS-158-645	c 27	N77-32308 *	US-PATENT-CLASS-165-106	c 33	N73-32818 *	US-PATENT-CLASS-173-131	c 15	N73-13463 *
US-PATENT-CLASS-158-647	c 33	N81-28360 *	US-PATENT-CLASS-165-106	c 34	N76-17317 *	US-PATENT-CLASS-173-132	c 37	N76-18454 *
US-PATENT-CLASS-158-648	c 33	N81-28360 *	US-PATENT-CLASS-165-107	c 09	N71-24807 *	US-PATENT-CLASS-174-DIG.6	c 26	N73-26752 *
US-PATENT-CLASS-158-649	c 33	N81-28360 *	US-PATENT-CLASS-165-107	c 44	N77-32581 *	US-PATENT-CLASS-174-DIG.6	c 26	N73-32571 *
US-PATENT-CLASS-158-654	c 76	N83-20789 *	US-PATENT-CLASS-165-109	c 35	N74-15093 *	US-PATENT-CLASS-174-DIG.8	c 33	N74-22865 *
US-PATENT-CLASS-158-654	c 35	N84-22930 *	US-PATENT-CLASS-165-110	c 44	N76-31687 *	US-PATENT-CLASS-174-106R	c 09	N72-22198 *
US-PATENT-CLASS-158-662	c 76	N83-20789 *	US-PATENT-CLASS-165-110	c 77	N75-20139 *	US-PATENT-CLASS-174-110.3	c 14	N71-27186 *
US-PATENT-CLASS-158-663	c 27	N77-32308 *	US-PATENT-CLASS-165-111	c 77	N75-20139 *	US-PATENT-CLASS-174-111	c 33	N74-27883 *
US-PATENT-CLASS-158-668	c 52	N84-23095 *	US-PATENT-CLASS-165-112	c 33	N71-24276 *	US-PATENT-CLASS-174-115	c 09	N70-38201 *
US-PATENT-CLASS-158-666	c 15	N72-11392 *	US-PATENT-CLASS-165-112	c 34	N83-34221 *	US-PATENT-CLASS-174-117FF	c 09	N72-22198 *
US-PATENT-CLASS-158-671	c 33	N82-26571 *	US-PATENT-CLASS-165-133	c 33	N71-16277 *	US-PATENT-CLASS-174-126CP	c 26	N73-32571 *
US-PATENT-CLASS-158-671	c 35	N84-12443 *	US-PATENT-CLASS-165-133	c 33	N71-25353 *	US-PATENT-CLASS-174-142	c 33	N80-18286 *
US-PATENT-CLASS-158-74	c 24	N81-29183 *	US-PATENT-CLASS-165-133	c 33	N72-20915 *	US-PATENT-CLASS-174-145	c 33	N76-16332 *
US-PATENT-CLASS-158-7	c 74	N75-12732 *	US-PATENT-CLASS-165-133	c 44	N76-23675 *	US-PATENT-CLASS-174-148	c 33	N76-16332 *
US-PATENT-CLASS-158-81	c 27	N84-22748 *	US-PATENT-CLASS-165-134R	c 74	N83-19596 *	US-PATENT-CLASS-174-15CA	c 31	N79-17029 *
US-PATENT-CLASS-158-84	c 15	N72-16330 *	US-PATENT-CLASS-165-134	c 34	N78-17336 *	US-PATENT-CLASS-174-15C	c 33	N74-27683 *
US-PATENT-CLASS-158-84	c 37	N82-24491 *	US-PATENT-CLASS-165-135	c 34	N84-22903 *	US-PATENT-CLASS-174-18	c 09	N69-21542 *
US-PATENT-CLASS-158-85	c 37	N82-24491 *	US-PATENT-CLASS-165-138	c 09	N71-24807 *	US-PATENT-CLASS-174-28	c 07	N71-27191 *
US-PATENT-CLASS-158-86	c 15	N72-16330 *	US-PATENT-CLASS-165-141	c 26	N73-32606 *	US-PATENT-CLASS-174-28	c 33	N74-27683 *
US-PATENT-CLASS-158-86	c 37	N82-24491 *	US-PATENT-CLASS-165-146	c 34	N79-13289 *	US-PATENT-CLASS-174-35	c 07	N71-19436 *
US-PATENT-CLASS-158-89	c 37	N75-15992 *	US-PATENT-CLASS-165-155	c 33	N72-20915 *	US-PATENT-CLASS-174-36	c 09	N72-22198 *
US-PATENT-CLASS-158-89	c 24	N79-25143 *	US-PATENT-CLASS-165-158	c 33	N72-20915 *	US-PATENT-CLASS-174-52S	c 15	N73-14469 *
US-PATENT-CLASS-158-89	c 27	N84-22748 *	US-PATENT-CLASS-165-161	c 33	N72-20915 *	US-PATENT-CLASS-174-68.5	c 15	N70-41960 *
US-PATENT-CLASS-158-905	c 35	N84-22930 *	US-PATENT-CLASS-165-164	c 34	N77-10463 *	US-PATENT-CLASS-174-69	c 33	N74-22865 *
US-PATENT-CLASS-158-94	c 32	N74-27612 *	US-PATENT-CLASS-165-166	c 54	N77-32722 *	US-PATENT-CLASS-174-70R	c 33	N74-22865 *
US-PATENT-CLASS-158-94	c 24	N74-30001 *	US-PATENT-CLASS-165-169	c 34	N79-13288 *	US-PATENT-CLASS-174-72	c 03	N69-21539 *
US-PATENT-CLASS-158-99	c 37	N75-15992 *	US-PATENT-CLASS-165-169	c 34	N79-13289 *	US-PATENT-CLASS-174-73R	c 33	N80-18286 *
US-PATENT-CLASS-16-242	c 31	N86-19479 *	US-PATENT-CLASS-165-16	c 31	N80-32583 *	US-PATENT-CLASS-174-84	c 15	N72-17455 *
US-PATENT-CLASS-16-294	c 37	N86-19605 *	US-PATENT-CLASS-165-170	c 34	N77-10463 *	US-PATENT-CLASS-175-1	c 46	N79-22679 *
US-PATENT-CLASS-16-390	c 31	N86-19479 *	US-PATENT-CLASS-165-174	c 33	N72-20915 *	US-PATENT-CLASS-175-26	c 15	N73-32362 *
US-PATENT-CLASS-161-115	c 18	N70-41583 *	US-PATENT-CLASS-165-185	c 26	N73-32606 *	US-PATENT-CLASS-175-310	c 15	N70-42034 *
US-PATENT-CLASS-161-116	c 37	N74-23064 *	US-PATENT-CLASS-165-185	c 34	N83-28356 *	US-PATENT-CLASS-175-323	c 14	N69-21923 *
US-PATENT-CLASS-161-127	c 18	N72-25540 *	US-PATENT-CLASS-165-1	c 09	N70-41717 *	US-PATENT-CLASS-175-45	c 35	N84-33768 *
US-PATENT-CLASS-161-127	c 18	N72-25541 *	US-PATENT-CLASS-165-1	c 34	N75-12222 *	US-PATENT-CLASS-175-78	c 46	N80-10709 *
US-PATENT-CLASS-161-161	c 33	N71-25351 *	US-PATENT-CLASS-165-1	c 34	N85-29180 *	US-PATENT-CLASS-176-11	c 24	N72-33681 *
US-PATENT-CLASS-161-182	c 15	N69-39735 *	US-PATENT-CLASS-165-20	c 03	N72-28025 *	US-PATENT-CLASS-176-11	c 25	N76-27383 *
US-PATENT-CLASS-161-182	c 37	N74-18126 *	US-PATENT-CLASS-165-2	c 33	N71-24876 *	US-PATENT-CLASS-176-11	c 25	N76-29379 *
US-PATENT-CLASS-161-189	c 23	N71-15978 *	US-PATENT-CLASS-165-2	c 35	N74-15093 *	US-PATENT-CLASS-176-11	c 25	N78-27226 *
US-PATENT-CLASS-161-192	c 37	N74-18126 *	US-PATENT-CLASS-165-2	c 44	N77-32581 *	US-PATENT-CLASS-176-14	c 25	N76-29379 *
US-PATENT-CLASS-161-196	c 37	N74-21063 *	US-PATENT-CLASS-165-2	c 44	N78-17460 *	US-PATENT-CLASS-176-169	c 22	N73-32528 *
US-PATENT-CLASS-161-214	c 06	N73-27980 *	US-PATENT-CLASS-165-2	c 51	N79-10694 *	US-PATENT-CLASS-176-16	c 25	N76-27383 *
US-PATENT-CLASS-161-227	c 06	N73-27980 *	US-PATENT-CLASS-165-2	c 27	N83-36220 *	US-PATENT-CLASS-176-16	c 25	N76-29379 *
US-PATENT-CLASS-161-42	c 37	N74-18126 *	US-PATENT-CLASS-165-30	c 51	N79-10694 *	US-PATENT-CLASS-176-16	c 25	N78-27226 *
US-PATENT-CLASS-161-43	c 37	N74-18126 *	US-PATENT-CLASS-165-30	c 31	N79-17029 *	US-PATENT-CLASS-176-22	c 73	N78-28913 *
US-PATENT-CLASS-161-67	c 33	N72-17947 *	US-PATENT-CLASS-165-30	c 35	N86-20750 *	US-PATENT-CLASS-176-33	c 73	N78-28913 *
US-PATENT-CLASS-161-68	c 18	N71-21651 *	US-PATENT-CLASS-165-32	c 31	N73-30829 *	US-PATENT-CLASS-176-39	c 73	N78-19920 *
US-PATENT-CLASS-161-68	c 18	N72-25540 *	US-PATENT-CLASS-165-32	c 33	N73-32818 *	US-PATENT-CLASS-176-39	c 73	N78-28913 *
US-PATENT-CLASS-161-68	c 18	N72-25541 *	US-PATENT-CLASS-165-32	c 34	N78-17337 *	US-PATENT-CLASS-176-3	c 75	N75-13625 *
US-PATENT-CLASS-161-69	c 33	N71-24858 *	US-PATENT-CLASS-165-32	c 34	N79-31523 *	US-PATENT-CLASS-176-45	c 22	N71-28759 *
US-PATENT-CLASS-161-7	c 18	N72-25540 *	US-PATENT-CLASS-165-32	c 44	N80-20810 *	US-PATENT-CLASS-176-86G	c 22	N72-20597 *
US-PATENT-CLASS-161-7	c 18	N72-25541 *	US-PATENT-CLASS-165-32	c 33	N82-24419 *	US-PATENT-CLASS-177-147	c 35	N85-20294 *
US-PATENT-CLASS-161-89	c 17	N71-28747 *	US-PATENT-CLASS-165-32	c 34	N83-28356 *	US-PATENT-CLASS-177-1	c 35	N77-19385 *
US-PATENT-CLASS-161-92	c 37	N75-26371 *	US-PATENT-CLASS-165-32	c 34	N83-35307 *	US-PATENT-CLASS-177-200	c 35	N74-26945 *
US-PATENT-CLASS-161-93	c 18	N73-12604 *	US-PATENT-CLASS-165-32	c 34	N84-14461 *	US-PATENT-CLASS-177-208	c 35	N77-19385 *
US-PATENT-CLASS-161-93	c 37	N74-18126 *	US-PATENT-CLASS-165-32	c 34	N85-29179 *	US-PATENT-CLASS-177-210	c 14	N71-10773 *
US-PATENT-CLASS-161-93	c 37	N75-26371 *	US-PATENT-CLASS-165-32	c 03	N72-28025 *	US-PATENT-CLASS-177-211	c 35	N74-26945 *
US-PATENT-CLASS-162-102	c 24	N76-14204 *	US-PATENT-CLASS-165-32	c 34	N84-14461 *	US-PATENT-CLASS-177-246	c 35	N74-26945 *
US-PATENT-CLASS-162-14	c 85	N79-17747 *	US-PATENT-CLASS-165-41	c 15	N71-26611 *	US-PATENT-CLASS-177-260	c 35	N85-20294 *
US-PATENT-CLASS-162-153	c 24	N76-14204 *	US-PATENT-CLASS-165-46	c 05	N71-19439 *	US-PATENT-CLASS-178-DIG.12	c 07	N72-12081 *
US-PATENT-CLASS-162-222	c 24	N76-14204 *	US-PATENT-CLASS-165-46	c 05	N71-24147 *	US-PATENT-CLASS-178-DIG.12	c 32	N75-21485 *
US-PATENT-CLASS-162-228	c 24	N76-14204 *	US-PATENT-CLASS-165-46	c 05	N73-20137 *	US-PATENT-CLASS-178-DIG.1	c 36	N74-20009 *
US-PATENT-CLASS-162-29	c 85	N79-17747 *	US-PATENT-CLASS-165-46	c 05	N73-26071 *	US-PATENT-CLASS-178-DIG.1	c 33	N75-30431 *
US-PATENT-CLASS-164-105	c 20	N79-21123 *	US-PATENT-CLASS-165-46	c 54	N82-29002 *	US-PATENT-CLASS-178-DIG.1	c 45	N76-17656 *
US-PATENT-CLASS-164-119	c 24	N84-16262 *	US-PATENT-CLASS-165-47	c 33	N71-29052 *	US-PATENT-CLASS-178-DIG.20	c 18	N76-14186 *
US-PATENT-CLASS-164-132	c 37	N76-23570 *	US-PATENT-CLASS-165-47	c 31	N73-30829 *	US-PATENT-CLASS-178-DIG.20	c 23	N72-27728 *
US-PATENT-CLASS-164-331.12	c 27	N83-34041 *	US-PATENT-CLASS-165-47	c 34	N75-12222 *	US-PATENT-CLASS-178-DIG.20	c 35	N75-19613 *
US-PATENT-CLASS-164-60	c 24	N77-27187 *	US-PATENT-CLASS-165-48R	c 35	N85-29214 *	US-PATENT-CLASS-178-DIG.21	c 16	N72-13437 *
US-PATENT-CLASS-165-DIG.6	c 34	N84-22903 *	US-PATENT-CLASS-165-58	c 27	N83-36220 *	US-PATENT-CLASS-178-DIG.23	c 07	N73-30115 *
US-PATENT-CLASS-165-104.14	c 05	N81-26114 *	US-PATENT-CLASS-165-61	c 34	N83-34221 *	US-PATENT-CLASS-178-DIG.25	c 74	N75-25706 *
US-PATENT-CLASS-165-104.14	c 34	N85-29179 *	US-PATENT-CLASS-165-61	c 35	N85-29214 *	US-PATENT-CLASS-178-DIG.28	c 08	N72-22164 *
US-PATENT-CLASS-165-104.14	c 34	N86-27593 *	US-PATENT-CLASS-165-61	c 35	N86-20750 *	US-PATENT-CLASS-178-DIG.29	c 35	N75-25123 *
US-PATENT-CLASS-165-104.26	c 74	N83-19596 *	US-PATENT-CLASS-165-64	c 35	N85-29214 *	US-PATENT-CLASS-178-DIG.32	c 71	N74-21014 *
US-PATENT-CLASS-165-104.26	c 34	N83-35307 *	US-PATENT-CLASS-165-65	c 35	N86-20750 *	US-PATENT-CLASS-178-DIG.35	c 09	N76-24280 *
US-PATENT-CLASS-165-104.26	c 34	N85-21568 *	US-PATENT-CLASS-165-76	c 34	N83-28356 *	US-PATENT-CLASS-178-DIG.36	c 08	N72-22164 *
US-PATENT-CLASS-165-104.26	c 34	N85-29180 *	US-PATENT-CLASS-165-76	c 37	N86-32736 *	US-PATENT-CLASS-178-DIG.6	c 10	N73-13235 *
US-PATENT-CLASS-165-104.26	c 34	N86-27593 *	US-PATENT-CLASS-165-80E	c 34	N83-34221 *	US-PATENT-CLASS-178-DIG.8	c 14	N72-25412 *
US-PATENT-CLASS-165-104	c 33	N71-25353 *	US-PATENT-CLASS-165-86	c 15	N71-26611 *	US-PATENT-CLASS-178-DIG.8	c 45	N76-17656 *
US-PATENT-CLASS-165-105	c 09	N71-24807 *	US-PATENT-CLASS-165-86	c 33	N71-29046 *	US-PATENT-CLASS-178-15	c 33	N75-19517 *
US-PATENT-CLASS-165-105	c 33	N71-25353 *	US-PATENT-CLASS-165-96	c 33	N70-36847 *	US-PATENT-CLASS-178-18	c 10	N73-32143 *
US-PATENT-CLASS-165-105	c 33	N72-17948 *	US-PATENT-CLASS-165-96	c 33	N71-22890 *	US-PATENT-CLASS-178-22.16	c 32	N82-31583 *
US-PATENT-CLASS-165-105	c 31	N73-30829 *	US-PATENT-CLASS-165-96	c 31	N73-30829 *	US-PATENT-CLASS-178-22.17	c 32	N82-31583 *
US-PATENT-CLASS-165-105	c 28	N73-32606 *	US-PATENT-CLASS-165-96	c 33	N73-32818 *	US-PATENT-CLASS-178-5.2R	c 09	N71-28618 *
US-PATENT-CLASS-165-105	c 34	N74-18552 *	US-PATENT-CLASS-165-96	c 34	N78-17337 *	US-PATENT-CLASS-178-5.2R	c 07	N72-17109 *
US-PATENT-CLASS-165-105	c 34	N75-12222 *	US-PATENT-CLASS-165-96	c 34	N84-14461 *	US-PATENT-CLASS-178-5.4	c 07	N72-17109 *
US-PATENT-CLASS-165-105	c 44	N75-32581 *	US-PATENT-CLASS-166-222	c 43	N81-26509 *	US-PATENT-CLASS-178-5.8R	c 71	N74-21014 *
US-PATENT-CLASS-165-105	c 44	N76-16612 *	US-PATENT-CLASS-166-248	c 43	N78-14452 *	US-PATENT-CLASS-178-50	c 08	N72-18184 *
US-PATENT-CLASS-165-105	c 34	N76-17317 *	US-PATENT-CLASS-166-259	c 43	N78-14452 *	US-PATENT-CLASS-178-52	c 08	N72-25208 *
US-PATENT-CLASS-165-105	c 34	N76-27515 *	US-PATENT-CLASS-166-303	c 25	N82-23282 *	US-PATENT-CLASS-178-54CF	c 09	N71-28618 *
US-PATENT-CLASS-165-105	c 34	N77-32413 *	US-PATENT-CLASS-166-63	c 46	N79-22679 *	US-PATENT-CLASS-178-54PE	c 09	N71-28618 *
US-PATENT-CLASS-165-105	c 25	N78-10224 *	US-PATENT-CLASS-166-77	c 43	N81-26509 *	US-PATENT-CLASS-178-58A	c 32	N75-21486 *
US-PATENT-CLASS-165-105	c 34	N78-17336 *						

US-PATENT-CLASS-178-58R	c 32	N80-18252 *	#	US-PATENT-CLASS-179-15.55R	c 08	N72-33172 *	#	US-PATENT-CLASS-188-1C	c 15	N72-20443 *	#
US-PATENT-CLASS-178-6.5	c 23	N72-27278 *	#	US-PATENT-CLASS-179-15AN	c 07	N73-16121 *	#	US-PATENT-CLASS-188-1C	c 15	N73-30460 *	#
US-PATENT-CLASS-178-6.6DD	c 07	N73-30115 *	#	US-PATENT-CLASS-179-15AT	c 32	N74-30524 *	#	US-PATENT-CLASS-188-1C	c 11	N73-32152 *	#
US-PATENT-CLASS-178-6.6DD	c 35	N74-11283 *	#	US-PATENT-CLASS-179-15A	c 08	N72-22162 *	#	US-PATENT-CLASS-188-1C	c 37	N79-10420 *	#
US-PATENT-CLASS-178-6.6	c 07	N71-11300 *	#	US-PATENT-CLASS-179-15A	c 07	N73-26118 *	#	US-PATENT-CLASS-188-103	c 15	N71-27146 *	#
US-PATENT-CLASS-178-6.6	c 07	N71-26102 *	#	US-PATENT-CLASS-179-15BA	c 60	N77-12721 *	#	US-PATENT-CLASS-188-129	c 15	N72-17450 *	#
US-PATENT-CLASS-178-6.7R	c 35	N74-15831 *	#	US-PATENT-CLASS-179-15BA	c 32	N80-18252 *	#	US-PATENT-CLASS-188-134	c 37	N81-15364 *	#
US-PATENT-CLASS-178-6.7	c 07	N72-17109 *	#	US-PATENT-CLASS-179-15BC	c 08	N72-25208 *	#	US-PATENT-CLASS-188-151A	c 44	N79-14527 *	#
US-PATENT-CLASS-178-6.8	c 08	N72-22164 *	#	US-PATENT-CLASS-179-15BC	c 07	N73-16121 *	#	US-PATENT-CLASS-188-163	c 37	N74-26976 *	#
US-PATENT-CLASS-178-6.8	c 14	N72-25412 *	#	US-PATENT-CLASS-179-15BC	c 32	N74-30523 *	#	US-PATENT-CLASS-188-171	c 37	N74-26976 *	#
US-PATENT-CLASS-178-6.8	c 07	N73-30115 *	#	US-PATENT-CLASS-179-15BC	c 33	N75-26243 *	#	US-PATENT-CLASS-188-180	c 37	N81-15364 *	#
US-PATENT-CLASS-178-6.8	c 33	N75-30431 *	#	US-PATENT-CLASS-179-15BL	c 08	N72-22162 *	#	US-PATENT-CLASS-188-184	c 37	N81-15364 *	#
US-PATENT-CLASS-178-6.8	c 45	N76-17656 *	#	US-PATENT-CLASS-179-15BM	c 07	N73-26118 *	#	US-PATENT-CLASS-188-1	c 15	N70-34861 *	#
US-PATENT-CLASS-178-6.6R	c 32	N75-24981 *	#	US-PATENT-CLASS-179-15BS	c 10	N71-33407 *	#	US-PATENT-CLASS-188-1	c 15	N70-38601 *	#
US-PATENT-CLASS-178-6.6	c 09	N71-25866 *	#	US-PATENT-CLASS-179-15BS	c 07	N72-20140 *	#	US-PATENT-CLASS-188-1	c 15	N70-40354 *	#
US-PATENT-CLASS-178-6.6	c 08	N72-18184 *	#	US-PATENT-CLASS-179-15BS	c 07	N73-30115 *	#	US-PATENT-CLASS-188-1	c 14	N71-17626 *	#
US-PATENT-CLASS-178-6.7	c 08	N70-41961 *	#	US-PATENT-CLASS-179-15BS	c 32	N75-26195 *	#	US-PATENT-CLASS-188-1	c 15	N71-22877 *	#
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US-PATENT-CLASS-178-6.9.1	c 32	N78-15323 *	#	US-PATENT-CLASS-179-15BV	c 07	N72-25172 *	#	US-PATENT-CLASS-188-1	c 15	N71-26243 *	#
US-PATENT-CLASS-178-6.9.4R	c 32	N74-10132 *	#	US-PATENT-CLASS-179-15BY	c 32	N74-30524 *	#	US-PATENT-CLASS-188-1	c 15	N71-27146 *	#
US-PATENT-CLASS-178-6.9.5R	c 07	N72-20140 *	#	US-PATENT-CLASS-179-15FD	c 08	N72-25208 *	#	US-PATENT-CLASS-188-1	c 15	N71-27169 *	#
US-PATENT-CLASS-178-6.9.5R	c 32	N75-26195 *	#	US-PATENT-CLASS-179-15F	c 07	N73-28012 *	#	US-PATENT-CLASS-188-266	c 15	N73-25513 *	#
US-PATENT-CLASS-178-6.9.5R	c 33	N76-14371 *	#	US-PATENT-CLASS-179-15	c 07	N69-39978 *	#	US-PATENT-CLASS-188-268	c 15	N72-20443 *	#
US-PATENT-CLASS-178-6.9.5R	c 60	N77-19760 *	#	US-PATENT-CLASS-179-15	c 07	N71-20814 *	#	US-PATENT-CLASS-188-269	c 44	N79-14527 *	#
US-PATENT-CLASS-178-6.9.5	c 07	N71-11281 *	#	US-PATENT-CLASS-179-15	c 07	N71-24621 *	#	US-PATENT-CLASS-188-291	c 54	N77-21844 *	#
US-PATENT-CLASS-178-6.9.5	c 10	N71-19468 *	#	US-PATENT-CLASS-179-15	c 07	N71-24622 *	#	US-PATENT-CLASS-188-371	c 37	N82-18601 *	#
US-PATENT-CLASS-178-6.9.5	c 10	N71-25865 *	#	US-PATENT-CLASS-179-15	c 08	N72-18184 *	#	US-PATENT-CLASS-188-65.1	c 15	N72-25512 *	#
US-PATENT-CLASS-178-6.9.5	c 10	N71-33407 *	#	US-PATENT-CLASS-179-175.1A	c 14	N73-27379 *	#	US-PATENT-CLASS-188-65.5	c 15	N71-27067 *	#
US-PATENT-CLASS-178-6.9.5	c 07	N72-25173 *	#	US-PATENT-CLASS-179-175.1A	c 33	N78-10375 *	#	US-PATENT-CLASS-188-87	c 12	N71-16894 *	#
US-PATENT-CLASS-178-6.9.5	c 07	N73-13149 *	#	US-PATENT-CLASS-179-18BC	c 32	N86-27513 *	#	US-PATENT-CLASS-188-88	c 15	N71-26611 *	#
US-PATENT-CLASS-178-6.9.5	c 09	N73-28084 *	#	US-PATENT-CLASS-179-18FG	c 33	N82-29538 *	#	US-PATENT-CLASS-188-96	c 15	N70-36947 *	#
US-PATENT-CLASS-178-6.9.5	c 17	N76-22245 *	#	US-PATENT-CLASS-179-1	c 07	N71-26181 *	#	US-PATENT-CLASS-19-205	c 37	N76-18456 *	#
US-PATENT-CLASS-178-6.9A	c 35	N75-21582 *	#	US-PATENT-CLASS-179-1	c 31	N71-33160 *	#	US-PATENT-CLASS-191-12.2-R	c 33	N86-20669 *	#
US-PATENT-CLASS-178-6.9C	c 32	N76-16249 *	#	US-PATENT-CLASS-179-27CA	c 32	N79-23310 *	#	US-PATENT-CLASS-192-43.1	c 15	N71-17805 *	#
US-PATENT-CLASS-178-6	c 07	N71-19433 *	#	US-PATENT-CLASS-179-78	c 33	N81-27397 *	#	US-PATENT-CLASS-195-1.8	c 51	N77-25769 *	#
US-PATENT-CLASS-178-6	c 09	N71-19449 *	#	US-PATENT-CLASS-179-84VF	c 32	N79-23310 *	#	US-PATENT-CLASS-195-1.8	c 51	N79-10694 *	#
US-PATENT-CLASS-178-6	c 07	N71-23026 *	#	US-PATENT-CLASS-179-91R	c 74	N78-14889 *	#	US-PATENT-CLASS-195-1.8	c 52	N79-14749 *	#
US-PATENT-CLASS-178-6	c 07	N71-26579 *	#	US-PATENT-CLASS-18-26	c 06	N71-22975 *	#	US-PATENT-CLASS-195-103.5K	c 51	N77-22794 *	#
US-PATENT-CLASS-178-6	c 07	N72-12081 *	#	US-PATENT-CLASS-18-39	c 27	N70-34783 *	#	US-PATENT-CLASS-195-103.5K	c 52	N79-14750 *	#
US-PATENT-CLASS-178-6	c 16	N72-13437 *	#	US-PATENT-CLASS-18-6	c 15	N71-26721 *	#	US-PATENT-CLASS-195-103.5L	c 52	N79-14750 *	#
US-PATENT-CLASS-178-6	c 10	N73-13235 *	#	US-PATENT-CLASS-180-105E	c 11	N72-20244 *	#	US-PATENT-CLASS-195-103.5R	c 06	N72-25149 *	#
US-PATENT-CLASS-178-6	c 36	N74-20009 *	#	US-PATENT-CLASS-180-118	c 31	N71-15689 *	#	US-PATENT-CLASS-195-103.5R	c 25	N75-12086 *	#
US-PATENT-CLASS-178-7.1	c 07	N71-24612 *	#	US-PATENT-CLASS-180-121	c 31	N71-15689 *	#	US-PATENT-CLASS-195-103.5R	c 35	N75-27330 *	#
US-PATENT-CLASS-178-7.1	c 07	N71-27341 *	#	US-PATENT-CLASS-180-125	c 15	N72-17451 *	#	US-PATENT-CLASS-195-103.5R	c 35	N75-33368 *	#
US-PATENT-CLASS-178-7.1	c 09	N72-17156 *	#	US-PATENT-CLASS-180-127	c 15	N72-17451 *	#	US-PATENT-CLASS-195-103.5R	c 51	N76-29891 *	#
US-PATENT-CLASS-178-7.1	c 32	N74-19790 *	#	US-PATENT-CLASS-180-168	c 35	N84-33769 *	#	US-PATENT-CLASS-195-103.5R	c 51	N77-22794 *	#
US-PATENT-CLASS-178-7.1	c 36	N75-19652 *	#	US-PATENT-CLASS-180-41	c 11	N73-26238 *	#	US-PATENT-CLASS-195-103.5R	c 25	N79-22235 *	#
US-PATENT-CLASS-178-7.2R	c 08	N72-22164 *	#	US-PATENT-CLASS-180-6.5	c 11	N73-26238 *	#	US-PATENT-CLASS-195-120	c 51	N75-13502 *	#
US-PATENT-CLASS-178-7.2	c 14	N70-41807 *	#	US-PATENT-CLASS-180-7.9	c 11	N73-26238 *	#	US-PATENT-CLASS-195-120	c 35	N75-27330 *	#
US-PATENT-CLASS-178-7.2	c 71	N74-21014 *	#	US-PATENT-CLASS-180-8A	c 11	N73-26238 *	#	US-PATENT-CLASS-195-127	c 15	N72-21465 *	#
US-PATENT-CLASS-178-7.2	c 35	N75-25123 *	#	US-PATENT-CLASS-180-9.2R	c 11	N73-26238 *	#	US-PATENT-CLASS-195-127	c 14	N72-25413 *	#
US-PATENT-CLASS-178-7.3	c 07	N71-22341 *	#	US-PATENT-CLASS-180-9.5	c 11	N73-26238 *	#	US-PATENT-CLASS-195-127	c 15	N73-20514 *	#
US-PATENT-CLASS-178-7.3	c 07	N71-22341 *	#	US-PATENT-CLASS-181-5R	c 71	N74-31148 *	#	US-PATENT-CLASS-195-127	c 05	N73-32011 *	#
US-PATENT-CLASS-178-7.5E	c 10	N72-31273 *	#	US-PATENT-CLASS-181-5	c 11	N71-28779 *	#	US-PATENT-CLASS-195-127	c 35	N75-12272 *	#
US-PATENT-CLASS-178-7.6	c 36	N74-20009 *	#	US-PATENT-CLASS-181-0.5	c 71	N85-30765 *	#	US-PATENT-CLASS-195-127	c 51	N75-13502 *	#
US-PATENT-CLASS-178-7.7	c 09	N71-12539 *	#	US-PATENT-CLASS-181-102	c 39	N80-10507 *	#	US-PATENT-CLASS-195-127	c 35	N75-27330 *	#
US-PATENT-CLASS-178-7.7	c 32	N74-20813 *	#	US-PATENT-CLASS-181-102	c 31	N80-32584 *	#	US-PATENT-CLASS-195-127	c 25	N79-22235 *	#
US-PATENT-CLASS-178-7.8.9	c 09	N76-24280 *	#	US-PATENT-CLASS-181-105	c 39	N80-10507 *	#	US-PATENT-CLASS-195-127	c 25	N79-24073 *	#
US-PATENT-CLASS-178-7.92	c 14	N72-25414 *	#	US-PATENT-CLASS-181-106	c 46	N79-22679 *	#	US-PATENT-CLASS-195-141	c 35	N75-27330 *	#
US-PATENT-CLASS-178-7.9	c 32	N75-21486 *	#	US-PATENT-CLASS-181-115	c 46	N79-23555 *	#	US-PATENT-CLASS-195-28N	c 06	N72-25149 *	#
US-PATENT-CLASS-178-88	c 07	N71-12392 *	#	US-PATENT-CLASS-181-117	c 46	N79-22679 *	#	US-PATENT-CLASS-195-66R	c 06	N72-27086 *	#
US-PATENT-CLASS-178-88	c 33	N74-12887 *	#	US-PATENT-CLASS-181-120	c 46	N79-23555 *	#	US-PATENT-CLASS-195-68	c 04	N69-27487 *	#
US-PATENT-CLASS-178-88	c 32	N74-20809 *	#	US-PATENT-CLASS-181-121	c 35	N84-22933 *	#	US-PATENT-CLASS-195-99	c 06	N71-17705 *	#
US-PATENT-CLASS-178-88	c 33	N74-27705 *	#	US-PATENT-CLASS-181-148	c 71	N79-23753 *	#	US-PATENT-CLASS-197-188	c 37	N77-19457 *	#
US-PATENT-CLASS-178-88	c 33	N76-14371 *	#	US-PATENT-CLASS-181-190	c 71	N79-14871 *	#	US-PATENT-CLASS-197-190	c 37	N77-19457 *	#
US-PATENT-CLASS-178-88	c 32	N77-10392 *	#	US-PATENT-CLASS-181-213	c 71	N79-14871 *	#	US-PATENT-CLASS-198-847	c 37	N80-32717 *	#
US-PATENT-CLASS-178-88	c 32	N77-24331 *	#	US-PATENT-CLASS-181-213	c 07	N83-33884 *	#	US-PATENT-CLASS-198-848	c 37	N80-32717 *	#
US-PATENT-CLASS-179-1DM	c 71	N79-23753 *	#	US-PATENT-CLASS-181-214	c 07	N81-14999 *	#	US-PATENT-CLASS-1	c 14	N71-27005 *	#
US-PATENT-CLASS-179-1MF	c 71	N79-23753 *	#	US-PATENT-CLASS-181-214	c 71	N82-16800 *	#	US-PATENT-CLASS-2-115	c 05	N72-25119 *	#
US-PATENT-CLASS-179-1MN	c 32	N79-23310 *	#	US-PATENT-CLASS-181-222	c 71	N79-14871 *	#	US-PATENT-CLASS-2-14	c 05	N71-23096 *	#
US-PATENT-CLASS-179-1P	c 10	N73-12244 *	#	US-PATENT-CLASS-181-293	c 71	N79-14871 *	#	US-PATENT-CLASS-2-161R	c 54	N84-23113 *	#
US-PATENT-CLASS-179-1R	c 07	N71-33108 *	#	US-PATENT-CLASS-181-33C	c 07	N74-32418 *	#	US-PATENT-CLASS-2-161R	c 54	N84-28484 *	#
US-PATENT-CLASS-179-1SA	c 10	N73-25240 *	#	US-PATENT-CLASS-181-33F	c 07	N74-32418 *	#	US-PATENT-CLASS-2-161	c 54	N78-17677 *	#
US-PATENT-CLASS-179-1SA	c 32	N76-31372 *	#	US-PATENT-CLASS-181-33HB	c 07	N74-27490 *	#	US-PATENT-CLASS-2-164	c 54	N84-28484 *	#
US-PATENT-CLASS-179-1SA	c 32	N77-30309 *	#	US-PATENT-CLASS-181-33HC	c 07	N74-33218 *	#	US-PATENT-CLASS-2-167	c 54	N84-23113 *	#
US-PATENT-CLASS-179-1SP	c 32	N77-30309 *	#	US-PATENT-CLASS-181-33HC	c 07	N76-18117 *	#	US-PATENT-CLASS-2-167	c 54	N84-28484 *	#
US-PATENT-CLASS-179-1VC	c 07	N71-33108 *	#	US-PATENT-CLASS-181-33H	c 07	N74-32418 *	#	US-PATENT-CLASS-2-2.1A	c 05	N72-22092 *	#
US-PATENT-CLASS-179-100.2A	c 21	N73-13644 *	#	US-PATENT-CLASS-181-33L	c 07	N74-32418 *	#	US-PATENT-CLASS-2-2.1A	c 05	N73-25125 *	#
US-PATENT-CLASS-179-100.2A	c 32	N74-27612 *	#	US-PATENT-CLASS-181-42	c 07	N74-32418 *	#	US-PATENT-CLASS-2-2.1A	c 05	N73-32012 *	#
US-PATENT-CLASS-179-100.2B	c 32	N74-27612 *	#	US-PATENT-CLASS-181-43	c 07	N74-15453 *	#	US-PATENT-CLASS-2-2.1A	c 54	N74-32546 *	#
US-PATENT-CLASS-179-100.2CH	c 36	N74-13205 *	#	US-PATENT-CLASS-181-52	c 28	N70-41582 *	#	US-PATENT-CLASS-2-2.1A	c 54	N77-32721 *	#
US-PATENT-CLASS-179-100.2CH	c 35	N78-29421 *	#	US-PATENT-CLASS-182-10	c 15	N71-27067 *	#	US-PATENT-CLASS-2-2.1A	c 54	N78-17675 *	#
US-PATENT-CLASS-179-100.2CH	c 35	N79-16246 *	#	US-PATENT-CLASS-182-178	c 39	N76-31562 *	#	US-PATENT-CLASS-2-2.1A	c 54	N78-31735 *	#
US-PATENT-CLASS-179-100.2C	c 35	N77-21392 *	#	US-PATENT-CLASS-182-191	c 05	N71-11199 *	#	US-PATENT-CLASS-2-2.1A	c 54	N78-31736 *	#
US-PATENT-CLASS-179-100.2C	c 07	N72-21119 *	#	US-PATENT-CLASS-182-5	c 15	N73-25512 *	#	US-PATENT-CLASS-2-2.1A	c 54	N79-24651 *	#
US-PATENT-CLASS-179-100.2MD	c 35	N74-11283 *	#	US-PATENT-CLASS-182-62.5	c 31	N81-27324 *	#	US-PATENT-CLASS-2-2.1A	c 54	N86-28618 *	#
US-PATENT-CLASS-179-100.2T	c 35	N74-11283 *	#	US-PATENT-CLASS-184-1	c 15	N71-23048 *	#	US-PATENT-CLASS-2-2.1A	c 54	N86-28619 *	#
US-PATENT-CLASS-179-100.2	c 09	N69-24329 *	#	US-PATENT-CLASS-185-38	c 37	N78-16369 *	#	US-PATENT-CLASS-2-2.1A	c 54	N86-28620 *	#
US-PATENT-CLASS-179-100.2	c 09	N71-25866 *	#	US-P							



US-PATENT-CLASS-2-2.1	c 05	N71-23161 *	US-PATENT-CLASS-204-192C	c 26	N82-29415 *	US-PATENT-CLASS-204-33	c 44	N79-11469 *
US-PATENT-CLASS-2-2.1	c 05	N71-24823 *	US-PATENT-CLASS-204-192C	c 26	N82-30371 *	US-PATENT-CLASS-204-33	c 44	N83-34449 *
US-PATENT-CLASS-2-2.1	c 05	N71-24730 *	US-PATENT-CLASS-204-192C	c 24	N84-22695 *	US-PATENT-CLASS-204-35N	c 27	N83-29388 *
US-PATENT-CLASS-2-2.1	c 05	N72-20096 *	US-PATENT-CLASS-204-192C	c 31	N85-20153 *	US-PATENT-CLASS-204-35N	c 44	N83-34449 *
US-PATENT-CLASS-2-2.1	c 05	N72-20098 *	US-PATENT-CLASS-204-192C	c 24	N85-21267 *	US-PATENT-CLASS-204-37.6	c 76	N84-35112 *
US-PATENT-CLASS-2-2.1	c 05	N72-25119 *	US-PATENT-CLASS-204-192C	c 76	N85-33826 *	US-PATENT-CLASS-204-37R	c 44	N79-11469 *
US-PATENT-CLASS-2-2.1	c 05	N73-26071 *	US-PATENT-CLASS-204-192C	c 27	N86-32569 *	US-PATENT-CLASS-204-37R	c 27	N83-29388 *
US-PATENT-CLASS-2-2.1	c 34	N78-17337 *	US-PATENT-CLASS-204-192C	c 31	N86-32567 *	US-PATENT-CLASS-204-37	c 33	N71-29151 *
US-PATENT-CLASS-2-2.1	c 54	N78-17678 *	US-PATENT-CLASS-204-192D	c 27	N86-32569 *	US-PATENT-CLASS-204-38A	c 44	N76-14595 *
US-PATENT-CLASS-2-2.1	c 54	N78-18761 *	US-PATENT-CLASS-204-192D	c 31	N86-32587 *	US-PATENT-CLASS-204-38B	c 44	N79-11469 *
US-PATENT-CLASS-2-275	c 18	N71-26285 *	US-PATENT-CLASS-204-192EC	c 27	N82-28440 *	US-PATENT-CLASS-204-38B	c 27	N82-33521 *
US-PATENT-CLASS-2-6	c 05	N71-26333 *	US-PATENT-CLASS-204-192EC	c 27	N82-33521 *	US-PATENT-CLASS-204-38	c 17	N71-24830 *
US-PATENT-CLASS-2-6	c 54	N78-17680 *	US-PATENT-CLASS-204-192EC	c 33	N84-22884 *	US-PATENT-CLASS-204-40	c 44	N76-14595 *
US-PATENT-CLASS-2-81	c 18	N71-26285 *	US-PATENT-CLASS-204-192E	c 37	N81-19455 *	US-PATENT-CLASS-204-40	c 24	N77-19171 *
US-PATENT-CLASS-2-81	c 05	N73-32012 *	US-PATENT-CLASS-204-192E	c 27	N82-28440 *	US-PATENT-CLASS-204-42	c 44	N76-14595 *
US-PATENT-CLASS-2-82	c 54	N74-32546 *	US-PATENT-CLASS-204-192E	c 27	N82-33521 *	US-PATENT-CLASS-204-430	c 35	N85-29212 *
US-PATENT-CLASS-200-114	c 33	N79-33393 *	US-PATENT-CLASS-204-192E	c 24	N83-10117 *	US-PATENT-CLASS-204-49	c 15	N72-25452 *
US-PATENT-CLASS-200-129	c 33	N75-27249 *	US-PATENT-CLASS-204-192E	c 52	N84-23095 *	US-PATENT-CLASS-204-49	c 44	N76-14595 *
US-PATENT-CLASS-200-152	c 09	N71-19610 *	US-PATENT-CLASS-204-192N	c 24	N85-21267 *	US-PATENT-CLASS-204-56R	c 44	N83-10494 *
US-PATENT-CLASS-200-153S	c 33	N80-18285 *	US-PATENT-CLASS-204-192N	c 26	N85-29005 *	US-PATENT-CLASS-204-56R	c 27	N83-29388 *
US-PATENT-CLASS-200-157	c 08	N86-27288 *	US-PATENT-CLASS-204-192P	c 76	N85-33826 *	US-PATENT-CLASS-204-56R	c 76	N84-35112 *
US-PATENT-CLASS-200-19	c 09	N70-39915 *	US-PATENT-CLASS-204-192R	c 24	N84-22695 *	US-PATENT-CLASS-204-59	c 15	N72-21466 *
US-PATENT-CLASS-200-304	c 33	N80-18285 *	US-PATENT-CLASS-204-192R	c 31	N85-20153 *	US-PATENT-CLASS-204-9	c 20	N74-32919 *
US-PATENT-CLASS-200-39	c 03	N70-38713 *	US-PATENT-CLASS-204-192R	c 24	N85-21267 *	US-PATENT-CLASS-204-9	c 24	N77-19171 *
US-PATENT-CLASS-200-46	c 74	N79-12890 *	US-PATENT-CLASS-204-192SP	c 24	N84-22695 *	US-PATENT-CLASS-204-195B	c 25	N79-22235 *
US-PATENT-CLASS-200-61.05	c 25	N86-27431 *	US-PATENT-CLASS-204-192	c 15	N73-12487 *	US-PATENT-CLASS-205-343	c 35	N75-30502 *
US-PATENT-CLASS-200-61.42	c 09	N71-12518 *	US-PATENT-CLASS-204-192	c 17	N73-24569 *	US-PATENT-CLASS-206-439	c 52	N79-14749 *
US-PATENT-CLASS-200-61.45	c 14	N70-41812 *	US-PATENT-CLASS-204-192	c 27	N74-13270 *	US-PATENT-CLASS-206-447	c 27	N84-14323 *
US-PATENT-CLASS-200-61	c 74	N79-12890 *	US-PATENT-CLASS-204-192	c 20	N74-31269 *	US-PATENT-CLASS-206-582	c 27	N84-14323 *
US-PATENT-CLASS-200-64	c 15	N72-17455 *	US-PATENT-CLASS-204-192	c 37	N75-19684 *	US-PATENT-CLASS-208-10	c 25	N79-11552 *
US-PATENT-CLASS-200-6	c 10	N71-15909 *	US-PATENT-CLASS-204-192	c 44	N77-14580 *	US-PATENT-CLASS-208-10	c 23	N84-16255 *
US-PATENT-CLASS-200-6	c 09	N71-16089 *	US-PATENT-CLASS-204-192	c 25	N79-24073 *	US-PATENT-CLASS-208-10	c 25	N84-22709 *
US-PATENT-CLASS-200-81.9M	c 09	N72-20199 *	US-PATENT-CLASS-204-195B	c 51	N80-27067 *	US-PATENT-CLASS-208-11	c 25	N86-25428 *
US-PATENT-CLASS-200-81R	c 09	N72-22204 *	US-PATENT-CLASS-204-195B	c 35	N82-28604 *	US-PATENT-CLASS-208-241	c 25	N82-23282 *
US-PATENT-CLASS-200-82C	c 09	N72-22204 *	US-PATENT-CLASS-204-195B	c 33	N76-19339 *	US-PATENT-CLASS-208-8LE	c 23	N84-16255 *
US-PATENT-CLASS-200-82	c 10	N71-23663 *	US-PATENT-CLASS-204-195W	c 25	N82-12166 *	US-PATENT-CLASS-208-8LE	c 25	N84-22709 *
US-PATENT-CLASS-200-83N	c 35	N75-15931 *	US-PATENT-CLASS-204-195	c 14	N71-17575 *	US-PATENT-CLASS-209-10	c 15	N71-20440 *
US-PATENT-CLASS-200-83	c 33	N79-33392 *	US-PATENT-CLASS-204-2.1	c 44	N81-29524 *	US-PATENT-CLASS-209-127R	c 35	N76-22509 *
US-PATENT-CLASS-201-10	c 27	N81-17261 *	US-PATENT-CLASS-204-2	c 18	N71-16210 *	US-PATENT-CLASS-209-250	c 37	N76-18456 *
US-PATENT-CLASS-201-17	c 44	N78-31527 *	US-PATENT-CLASS-204-222	c 31	N74-23065 *	US-PATENT-CLASS-209-300	c 37	N76-18456 *
US-PATENT-CLASS-201-17	c 25	N81-33246 *	US-PATENT-CLASS-204-224	c 37	N80-14395 *	US-PATENT-CLASS-209-305	c 37	N76-18456 *
US-PATENT-CLASS-201-17	c 25	N82-29371 *	US-PATENT-CLASS-204-242	c 33	N75-27252 *	US-PATENT-CLASS-209-349	c 15	N72-22483 *
US-PATENT-CLASS-201-17	c 25	N83-31743 *	US-PATENT-CLASS-204-242	c 25	N84-12262 *	US-PATENT-CLASS-209-422	c 71	N85-30765 *
US-PATENT-CLASS-201-17	c 25	N85-35253 *	US-PATENT-CLASS-204-252	c 28	N81-24280 *	US-PATENT-CLASS-209-638	c 17	N71-16393 *
US-PATENT-CLASS-201-25	c 27	N81-17261 *	US-PATENT-CLASS-204-263	c 14	N71-28933 *	US-PATENT-CLASS-210-DIG.23	c 52	N79-17479 *
US-PATENT-CLASS-201-8	c 27	N81-17261 *	US-PATENT-CLASS-204-263	c 25	N82-12166 *	US-PATENT-CLASS-210-DIG.27	c 27	N77-31308 *
US-PATENT-CLASS-202-118	c 31	N81-15154 *	US-PATENT-CLASS-204-264	c 25	N82-12166 *	US-PATENT-CLASS-210-103	c 05	N72-27102 *
US-PATENT-CLASS-202-182	c 05	N71-11207 *	US-PATENT-CLASS-204-266	c 28	N81-24280 *	US-PATENT-CLASS-210-104	c 05	N72-27102 *
US-PATENT-CLASS-202-234	c 15	N71-23086 *	US-PATENT-CLASS-204-266	c 25	N82-12166 *	US-PATENT-CLASS-210-108	c 34	N79-24185 *
US-PATENT-CLASS-203-12	c 25	N82-28368 *	US-PATENT-CLASS-204-267	c 33	N75-27252 *	US-PATENT-CLASS-210-110	c 05	N72-27102 *
US-PATENT-CLASS-204-DIG.11	c 25	N77-32255 *	US-PATENT-CLASS-204-275	c 25	N82-12166 *	US-PATENT-CLASS-210-137	c 05	N72-27102 *
US-PATENT-CLASS-204-DIG.3	c 25	N84-12262 *	US-PATENT-CLASS-204-276	c 25	N82-12166 *	US-PATENT-CLASS-210-142	c 34	N79-24285 *
US-PATENT-CLASS-204-DIG.3	c 44	N84-23019 *	US-PATENT-CLASS-204-278	c 25	N82-12166 *	US-PATENT-CLASS-210-151	c 45	N84-12654 *
US-PATENT-CLASS-204-1T	c 25	N79-22235 *	US-PATENT-CLASS-204-278	c 44	N84-12262 *	US-PATENT-CLASS-210-186	c 37	N80-10494 *
US-PATENT-CLASS-204-1T	c 51	N81-28698 *	US-PATENT-CLASS-204-279	c 33	N75-27252 *	US-PATENT-CLASS-210-188	c 12	N72-25292 *
US-PATENT-CLASS-204-1T	c 25	N82-12166 *	US-PATENT-CLASS-204-280R	c 25	N83-13187 *	US-PATENT-CLASS-210-192	c 54	N78-14784 *
US-PATENT-CLASS-204-1T	c 76	N84-35112 *	US-PATENT-CLASS-204-280	c 44	N84-23019 *	US-PATENT-CLASS-210-212	c 03	N72-20033 *
US-PATENT-CLASS-204-1T	c 35	N85-29212 *	US-PATENT-CLASS-204-286	c 33	N75-27252 *	US-PATENT-CLASS-210-222	c 35	N78-12390 *
US-PATENT-CLASS-204-1T	c 76	N85-30923 *	US-PATENT-CLASS-204-290F	c 28	N81-24280 *	US-PATENT-CLASS-210-22	c 52	N80-14687 *
US-PATENT-CLASS-204-129.55	c 31	N83-19947 *	US-PATENT-CLASS-204-290F	c 44	N82-29710 *	US-PATENT-CLASS-210-23F	c 51	N79-10693 *
US-PATENT-CLASS-204-129.75	c 31	N83-19947 *	US-PATENT-CLASS-204-290R	c 33	N75-27252 *	US-PATENT-CLASS-210-23H	c 27	N80-23452 *
US-PATENT-CLASS-204-129	c 28	N81-24280 *	US-PATENT-CLASS-204-290R	c 28	N81-24280 *	US-PATENT-CLASS-210-234	c 34	N75-33342 *
US-PATENT-CLASS-204-129	c 25	N84-12262 *	US-PATENT-CLASS-204-290R	c 44	N82-29710 *	US-PATENT-CLASS-210-24R	c 27	N81-14076 *
US-PATENT-CLASS-204-129	c 44	N84-23019 *	US-PATENT-CLASS-204-290	c 25	N84-12262 *	US-PATENT-CLASS-210-24	c 27	N77-30236 *
US-PATENT-CLASS-204-130	c 15	N72-21466 *	US-PATENT-CLASS-204-290	c 44	N84-12262 *	US-PATENT-CLASS-210-24	c 25	N81-19244 *
US-PATENT-CLASS-204-157.1H	c 25	N74-30502 *	US-PATENT-CLASS-204-291	c 28	N81-24280 *	US-PATENT-CLASS-210-259	c 34	N75-33342 *
US-PATENT-CLASS-204-157.1H	c 37	N76-18458 *	US-PATENT-CLASS-204-292	c 25	N78-10225 *	US-PATENT-CLASS-210-28	c 85	N79-17747 *
US-PATENT-CLASS-204-157.1R	c 25	N77-32255 *	US-PATENT-CLASS-204-298	c 15	N70-34967 *	US-PATENT-CLASS-210-304	c 34	N75-33342 *
US-PATENT-CLASS-204-157.1R	c 44	N77-32580 *	US-PATENT-CLASS-204-298	c 09	N71-26701 *	US-PATENT-CLASS-210-314	c 28	N70-41447 *
US-PATENT-CLASS-204-157.1R	c 15	N79-11470 *	US-PATENT-CLASS-204-298	c 15	N72-32487 *	US-PATENT-CLASS-210-321.1	c 25	N82-21269 *
US-PATENT-CLASS-204-157.18AG	c 44	N72-25452 *	US-PATENT-CLASS-204-298	c 37	N75-19684 *	US-PATENT-CLASS-210-321B	c 52	N80-14687 *
US-PATENT-CLASS-204-158R	c 25	N77-32255 *	US-PATENT-CLASS-204-298	c 27	N86-32569 *	US-PATENT-CLASS-210-333	c 34	N75-33342 *
US-PATENT-CLASS-204-159.11	c 27	N80-32516 *	US-PATENT-CLASS-204-298	c 31	N86-32587 *	US-PATENT-CLASS-210-340	c 37	N80-10494 *
US-PATENT-CLASS-204-159.14	c 27	N80-32516 *	US-PATENT-CLASS-204-298R	c 25	N78-14104 *	US-PATENT-CLASS-210-340	c 27	N77-31308 *
US-PATENT-CLASS-204-159.19	c 27	N80-26446 *	US-PATENT-CLASS-204-299R	c 25	N79-14169 *	US-PATENT-CLASS-210-40	c 85	N79-17747 *
US-PATENT-CLASS-204-162R	c 25	N77-32255 *	US-PATENT-CLASS-204-299R	c 37	N80-14397 *	US-PATENT-CLASS-210-40	c 45	N82-11634 *
US-PATENT-CLASS-204-164	c 26	N78-32229 *	US-PATENT-CLASS-204-299R	c 51	N80-16715 *	US-PATENT-CLASS-210-411	c 34	N75-33342 *
US-PATENT-CLASS-204-168	c 24	N71-25555 *	US-PATENT-CLASS-204-299R	c 25	N83-10126 *	US-PATENT-CLASS-210-425	c 34	N75-33342 *
US-PATENT-CLASS-204-16	c 24	N77-19171 *	US-PATENT-CLASS-204-299R	c 25	N83-13187 *	US-PATENT-CLASS-210-429	c 37	N76-14463 *
US-PATENT-CLASS-204-171	c 27	N80-23452 *	US-PATENT-CLASS-204-299	c 34	N74-27744 *	US-PATENT-CLASS-210-433M	c 51	N79-10693 *
US-PATENT-CLASS-204-175	c 26	N78-32229 *	US-PATENT-CLASS-204-301	c 25	N79-10163 *	US-PATENT-CLASS-210-445	c 15	N72-11389 *
US-PATENT-CLASS-204-177	c 25	N75-12087 *	US-PATENT-CLASS-204-301	c 54	N78-14784 *	US-PATENT-CLASS-210-45	c 85	N79-17747 *
US-PATENT-CLASS-204-180G	c 25	N78-14104 *	US-PATENT-CLASS-204-305	c 03	N71-24718 *	US-PATENT-CLASS-210-500M	c 27	N80-23452 *
US-PATENT-CLASS-204-180G	c 25	N79-14169 *	US-PATENT-CLASS-204-305	c 09	N71-28691 *	US-PATENT-CLASS-210-500M	c 25	N81-17187 *
US-PATENT-CLASS-204-180G	c 37	N80-14397 *	US-PATENT-CLASS-204-32A	c 33	N77-26385 *	US-PATENT-CLASS-210-500	c 25	N75-12087 *
US-PATENT-CLASS-204-180P	c 54	N78-14784 *	US-PATENT-CLASS-204-32R	c 44	N76-14595 *	US-PATENT-CLASS-210-50	c 45	N79-12584 *
US-PATENT-CLASS-204-180R	c 25	N74-26948 *	US-PATENT-CLASS-204-324	c 33	N73-16918 *	US-PATENT-CLASS-210-512	c 34	N75-33342 *
US-PATENT-CLASS-204-180R	c 34	N74-27744 *	US-PATENT-CLASS-204-325	c 33	N73-16918 *	US-PATENT-CLASS-210-54	c 85	N79-17747 *
US-PATENT-CLASS-204-180R	c 51	N80-16715 *	US-PATENT-CLASS-204-328	c 33	N73-16918 *	US-PATENT-CLASS-210-57	c 45	N80-14579 *
US-PATENT-CLASS-204-180S	c 25	N79-10163 *	US-PATENT-CLASS-204-32	c 44	N79-11469 *	US-PATENT-CLASS-210-602	c 45	N84-12654 *
US-PATENT-CLASS-204-180S	c 25	N79-14169 *	US-PATENT-CLASS-204-33	c 17	N71-25903 *	US-PATENT-CLASS-210-605	c 45	N84-12654 *
US-PATENT-CLASS-204-192-C	c 27	N86-19458 *	US-PATENT-CLASS-204-33	c 44	N76-14595 *	US-PATENT-CLASS-210-60	c 45	N79-12584 *
US-PATENT-CLASS-204-192-D	c 27	N86-19458 *						
US-PATENT-CLASS-204-192C	c 76	N79-14906 *						



US-PATENT-CLASS-210-617	c 45	N84-12654 *	#	US-PATENT-CLASS-219-302	c 51	N79-10694 *	#	US-PATENT-CLASS-222-61	c 27	N71-29155 *	#
US-PATENT-CLASS-210-63R	c 25	N78-10225 *	#	US-PATENT-CLASS-219-304	c 37	N77-13418 *	#	US-PATENT-CLASS-222-61	c 37	N77-28487 *	#
US-PATENT-CLASS-210-63R	c 45	N79-12584 *	#	US-PATENT-CLASS-219-343	c 27	N83-36220 *	#	US-PATENT-CLASS-222-71	c 15	N72-21465 *	#
US-PATENT-CLASS-210-63Z	c 45	N80-14579 *	#	US-PATENT-CLASS-219-347	c 15	N69-27871 *	#	US-PATENT-CLASS-222-95	c 37	N77-28487 *	#
US-PATENT-CLASS-210-66	c 85	N79-17747 *	#	US-PATENT-CLASS-219-347	c 33	N70-34545 *	#	US-PATENT-CLASS-224-25A	c 05	N72-23085 *	#
US-PATENT-CLASS-210-67	c 85	N79-17747 *	#	US-PATENT-CLASS-219-348	c 15	N73-27405 *	#	US-PATENT-CLASS-224-25	c 05	N71-12351 *	#
US-PATENT-CLASS-210-70	c 85	N78-10225 *	#	US-PATENT-CLASS-219-34	c 09	N70-33312 *	#	US-PATENT-CLASS-224-44A	c 54	N74-17853 *	#
US-PATENT-CLASS-210-71	c 25	N79-17747 *	#	US-PATENT-CLASS-219-354	c 27	N83-36220 *	#	US-PATENT-CLASS-225-103	c 37	N82-32730 *	#
US-PATENT-CLASS-210-73R	c 85	N79-17747 *	#	US-PATENT-CLASS-219-364	c 33	N71-16278 *	#	US-PATENT-CLASS-225-1	c 15	N71-17628 *	#
US-PATENT-CLASS-210-748	c 71	N83-35781 *	#	US-PATENT-CLASS-219-378	c 33	N71-25353 *	#	US-PATENT-CLASS-225-2	c 26	N71-14354 *	#
US-PATENT-CLASS-210-748	c 35	N84-17555 *	#	US-PATENT-CLASS-219-388	c 35	N74-15831 *	#	US-PATENT-CLASS-226-190	c 08	N71-19420 *	#
US-PATENT-CLASS-210-82	c 34	N75-33342 *	#	US-PATENT-CLASS-219-390	c 27	N83-36220 *	#	US-PATENT-CLASS-226-58	c 14	N71-28935 *	#
US-PATENT-CLASS-210-96M	c 54	N78-14784 *	#	US-PATENT-CLASS-219-390	c 35	N86-20750 *	#	US-PATENT-CLASS-227-27	c 37	N86-25790 *	#
US-PATENT-CLASS-210-96M	c 51	N79-10693 *	#	US-PATENT-CLASS-219-395	c 35	N86-20750 *	#	US-PATENT-CLASS-227-28	c 37	N86-25790 *	#
US-PATENT-CLASS-211-126	c 35	N86-20751 *	#	US-PATENT-CLASS-219-396	c 35	N86-20750 *	#	US-PATENT-CLASS-228-103	c 35	N83-35338 *	#
US-PATENT-CLASS-211-74	c 35	N86-20751 *	#	US-PATENT-CLASS-219-410	c 12	N79-26075 *	#	US-PATENT-CLASS-228-107	c 37	N79-13364 *	#
US-PATENT-CLASS-212-11	c 32	N71-17609 *	#	US-PATENT-CLASS-219-411	c 17	N69-25147 *	#	US-PATENT-CLASS-228-116	c 37	N81-19455 *	#
US-PATENT-CLASS-212-134	c 15	N72-11388 *	#	US-PATENT-CLASS-219-411	c 27	N83-36220 *	#	US-PATENT-CLASS-228-118	c 24	N81-17170 *	#
US-PATENT-CLASS-212-230	c 37	N86-20789 *	#	US-PATENT-CLASS-219-413	c 14	N71-28958 *	#	US-PATENT-CLASS-228-118	c 24	N81-26179 *	#
US-PATENT-CLASS-212-267	c 31	N81-27324 *	#	US-PATENT-CLASS-219-477	c 33	N74-14935 *	#	US-PATENT-CLASS-228-119	c 37	N86-32736 *	#
US-PATENT-CLASS-213-81	c 37	N77-23483 *	#	US-PATENT-CLASS-219-497	c 77	N75-20140 *	#	US-PATENT-CLASS-228-124	c 26	N77-29260 *	#
US-PATENT-CLASS-214-1CM	c 37	N76-15460 *	#	US-PATENT-CLASS-219-499	c 14	N73-26430 *	#	US-PATENT-CLASS-228-13	c 18	N79-11108 *	#
US-PATENT-CLASS-214-18C	c 54	N77-32721 *	#	US-PATENT-CLASS-219-501	c 77	N75-20140 *	#	US-PATENT-CLASS-228-151	c 18	N79-11108 *	#
US-PATENT-CLASS-214-1B	c 54	N75-27758 *	#	US-PATENT-CLASS-219-505	c 14	N71-27058 *	#	US-PATENT-CLASS-228-157	c 24	N82-2496 *	#
US-PATENT-CLASS-214-1CM	c 15	N72-28495 *	#	US-PATENT-CLASS-219-505	c 77	N75-20140 *	#	US-PATENT-CLASS-228-165	c 35	N84-12124 *	#
US-PATENT-CLASS-214-1CM	c 54	N75-12616 *	#	US-PATENT-CLASS-219-510	c 35	N73-26430 *	#	US-PATENT-CLASS-228-170	c 24	N81-17170 *	#
US-PATENT-CLASS-214-1CM	c 18	N75-27041 *	#	US-PATENT-CLASS-219-522	c 11	N73-12265 *	#	US-PATENT-CLASS-228-173	c 18	N79-11108 *	#
US-PATENT-CLASS-214-1CM	c 54	N75-27758 *	#	US-PATENT-CLASS-219-522	c 52	N80-16725 *	#	US-PATENT-CLASS-228-174	c 24	N81-17170 *	#
US-PATENT-CLASS-214-1CM	c 37	N77-23483 *	#	US-PATENT-CLASS-219-522	c 27	N84-33589 *	#	US-PATENT-CLASS-228-181	c 24	N84-12124 *	#
US-PATENT-CLASS-214-1CM	c 54	N77-32721 *	#	US-PATENT-CLASS-219-530	c 33	N71-25353 *	#	US-PATENT-CLASS-228-190	c 24	N75-28135 *	#
US-PATENT-CLASS-214-1CM	c 54	N78-17676 *	#	US-PATENT-CLASS-219-539	c 33	N74-14935 *	#	US-PATENT-CLASS-228-190	c 26	N77-28265 *	#
US-PATENT-CLASS-214-1R	c 37	N76-15457 *	#	US-PATENT-CLASS-219-541	c 27	N84-33589 *	#	US-PATENT-CLASS-228-190	c 24	N81-17170 *	#
US-PATENT-CLASS-214-16.1CB	c 37	N77-22480 *	#	US-PATENT-CLASS-219-543	c 27	N84-33589 *	#	US-PATENT-CLASS-228-193	c 24	N75-28135 *	#
US-PATENT-CLASS-214-1	c 32	N70-41367 *	#	US-PATENT-CLASS-219-545	c 33	N82-26571 *	#	US-PATENT-CLASS-228-193	c 37	N76-18455 *	#
US-PATENT-CLASS-214-90R	c 03	N72-25021 *	#	US-PATENT-CLASS-219-62	c 15	N73-28515 *	#	US-PATENT-CLASS-228-193	c 35	N83-35338 *	#
US-PATENT-CLASS-215-247	c 33	N76-19339 *	#	US-PATENT-CLASS-219-72	c 15	N71-14932 *	#	US-PATENT-CLASS-228-194	c 26	N77-28265 *	#
US-PATENT-CLASS-219-10.41	c 33	N82-26571 *	#	US-PATENT-CLASS-219-76.14	c 24	N85-30027 *	#	US-PATENT-CLASS-228-1	c 37	N75-25185 *	#
US-PATENT-CLASS-219-10.43	c 31	N85-29083 *	#	US-PATENT-CLASS-219-78	c 37	N74-11300 *	#	US-PATENT-CLASS-228-2.5	c 37	N79-13364 *	#
US-PATENT-CLASS-219-10.49R	c 33	N81-19389 *	#	US-PATENT-CLASS-219-85CA	c 35	N80-20560 *	#	US-PATENT-CLASS-228-205	c 37	N81-19455 *	#
US-PATENT-CLASS-219-10.49	c 11	N71-15925 *	#	US-PATENT-CLASS-219-85CM	c 35	N80-20560 *	#	US-PATENT-CLASS-228-206	c 37	N76-18455 *	#
US-PATENT-CLASS-219-10.49	c 31	N85-29083 *	#	US-PATENT-CLASS-219-85R	c 35	N80-20560 *	#	US-PATENT-CLASS-228-212	c 37	N80-23655 *	#
US-PATENT-CLASS-219-10.53	c 33	N82-26571 *	#	US-PATENT-CLASS-219-85	c 15	N72-22491 *	#	US-PATENT-CLASS-228-212	c 24	N84-12124 *	#
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US-PATENT-CLASS-219-10.67	c 33	N81-19389 *	#	US-PATENT-CLASS-219-85	c 15	N71-18617 *	#	US-PATENT-CLASS-228-222	c 37	N80-23655 *	#
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US-PATENT-CLASS-219-101	c 15	N73-14468 *	#	US-PATENT-CLASS-219-92	c 37	N76-27568 *	#	US-PATENT-CLASS-228-238	c 37	N76-18455 *	#
US-PATENT-CLASS-219-101	c 37	N74-11300 *	#	US-PATENT-CLASS-219-92	c 37	N77-11397 *	#	US-PATENT-CLASS-228-263.18	c 35	N83-35338 *	#
US-PATENT-CLASS-219-107	c 15	N73-28515 *	#	US-PATENT-CLASS-22-200	c 15	N71-15966 *	#	US-PATENT-CLASS-228-263	c 26	N77-29260 *	#
US-PATENT-CLASS-219-107	c 37	N74-11300 *	#	US-PATENT-CLASS-22-203	c 17	N70-38198 *	#	US-PATENT-CLASS-228-44.1R	c 37	N80-23655 *	#
US-PATENT-CLASS-219-109	c 15	N72-23497 *	#	US-PATENT-CLASS-220-14	c 15	N69-39935 *	#	US-PATENT-CLASS-228-5.1	c 44	N79-24431 *	#
US-PATENT-CLASS-219-117	c 15	N73-32358 *	#	US-PATENT-CLASS-220-15	c 31	N71-15664 *	#	US-PATENT-CLASS-228-50	c 15	N70-39924 *	#
US-PATENT-CLASS-219-118	c 37	N76-27568 *	#	US-PATENT-CLASS-220-15	c 34	N75-12222 *	#	US-PATENT-CLASS-228-53	c 15	N70-40204 *	#
US-PATENT-CLASS-219-118	c 37	N77-11397 *	#	US-PATENT-CLASS-220-2.2	c 24	N79-25143 *	#	US-PATENT-CLASS-228-57	c 15	N72-22491 *	#
US-PATENT-CLASS-219-119	c 15	N73-14468 *	#	US-PATENT-CLASS-220-2.66	c 37	N79-22474 *	#	US-PATENT-CLASS-228-6	c 44	N79-24431 *	#
US-PATENT-CLASS-219-121E	c 26	N86-32551 *	#	US-PATENT-CLASS-220-306	c 27	N84-27886 *	#	US-PATENT-CLASS-228-7	c 15	N71-15607 *	#
US-PATENT-CLASS-219-121LN	c 44	N82-26777 *	#	US-PATENT-CLASS-220-335	c 45	N83-25217 *	#	US-PATENT-CLASS-228-8	c 15	N71-23050 *	#
US-PATENT-CLASS-219-121LY	c 26	N86-32551 *	#	US-PATENT-CLASS-220-378	c 37	N82-24490 *	#	US-PATENT-CLASS-228-8	c 37	N79-10421 *	#
US-PATENT-CLASS-219-121P	c 15	N72-32487 *	#	US-PATENT-CLASS-220-423	c 37	N80-18393 *	#	US-PATENT-CLASS-228-9	c 15	N71-20393 *	#
US-PATENT-CLASS-219-121	c 15	N69-21471 *	#	US-PATENT-CLASS-220-429	c 44	N80-20808 *	#	US-PATENT-CLASS-228-9	c 32	N73-13921 *	#
US-PATENT-CLASS-219-121	c 33	N70-34540 *	#	US-PATENT-CLASS-220-445	c 37	N80-18393 *	#	US-PATENT-CLASS-23-109	c 04	N72-33072 *	#
US-PATENT-CLASS-219-121	c 15	N71-19486 *	#	US-PATENT-CLASS-220-46	c 15	N71-27068 *	#	US-PATENT-CLASS-23-201	c 06	N72-17095 *	#
US-PATENT-CLASS-219-121	c 16	N71-20400 *	#	US-PATENT-CLASS-220-5R	c 15	N72-22486 *	#	US-PATENT-CLASS-23-208	c 15	N69-21922 *	#
US-PATENT-CLASS-219-121	c 15	N71-27135 *	#	US-PATENT-CLASS-220-55	c 15	N69-27052 *	#	US-PATENT-CLASS-23-208	c 26	N70-36805 *	#
US-PATENT-CLASS-219-124.2.2	c 37	N79-10421 *	#	US-PATENT-CLASS-220-63	c 11	N70-38182 *	#	US-PATENT-CLASS-23-209.1	c 15	N72-20446 *	#
US-PATENT-CLASS-219-124.32	c 37	N79-10421 *	#	US-PATENT-CLASS-220-67	c 15	N71-10577 *	#	US-PATENT-CLASS-23-230B	c 25	N75-14844 *	#
US-PATENT-CLASS-219-124.34	c 37	N86-21850 *	#	US-PATENT-CLASS-220-82R	c 31	N81-19343 *	#	US-PATENT-CLASS-23-230B	c 23	N77-17161 *	#
US-PATENT-CLASS-219-125.1	c 37	N79-10421 *	#	US-PATENT-CLASS-220-89A	c 31	N81-19343 *	#	US-PATENT-CLASS-23-230B	c 25	N79-14169 *	#
US-PATENT-CLASS-219-125	c 15	N71-23815 *	#	US-PATENT-CLASS-220-89	c 11	N71-15960 *	#	US-PATENT-CLASS-23-230L	c 51	N80-27067 *	#
US-PATENT-CLASS-219-125	c 37	N75-27376 *	#	US-PATENT-CLASS-220-89	c 11	N71-17600 *	#	US-PATENT-CLASS-23-230L	c 35	N74-32879 *	#
US-PATENT-CLASS-219-130	c 15	N71-23796 *	#	US-PATENT-CLASS-220-901	c 37	N80-18393 *	#	US-PATENT-CLASS-23-230M	c 25	N76-18245 *	#
US-PATENT-CLASS-219-131	c 15	N71-15871 *	#	US-PATENT-CLASS-220-9	c 23	N71-22881 *	#	US-PATENT-CLASS-23-230M	c 23	N77-17161 *	#
US-PATENT-CLASS-219-137	c 15	N70-34814 *	#	US-PATENT-CLASS-220-9	c 18	N71-23658 *	#	US-PATENT-CLASS-23-230PC	c 25	N78-15210 *	#
US-PATENT-CLASS-219-137	c 37	N75-19683 *	#	US-PATENT-CLASS-220-9	c 15	N71-23816 *	#	US-PATENT-CLASS-23-230PC	c 25	N82-12166 *	#
US-PATENT-CLASS-219-158	c 15	N72-22491 *	#	US-PATENT-CLASS-220-9	c 33	N71-25351 *	#	US-PATENT-CLASS-23-230R	c 06	N72-17094 *	#
US-PATENT-CLASS-219-160	c 37	N80-23655 *	#	US-PATENT-CLASS-221-265	c 51	N74-15778 *	#	US-PATENT-CLASS-23-230R	c 17	N73-12547 *	#
US-PATENT-CLASS-219-161	c 37	N80-23655 *	#	US-PATENT-CLASS-222-131	c 31	N79-21225 *	#	US-PATENT-CLASS-23-230R	c 17	N73-27446 *	#
US-PATENT-CLASS-219-19	c 33	N70-34812 *	#	US-PATENT-CLASS-222-135	c 15	N72-21465 *	#	US-PATENT-CLASS-23-230R	c 25	N76-18245 *	#
US-PATENT-CLASS-219-201	c 52	N80-16725 *	#	US-PATENT-CLASS-222-137	c 14	N71-27005 *	#	US-PATENT-CLASS-23-230R	c 45	N76-31714 *	#
US-PATENT-CLASS-219-201	c 37	N85-29286 *	#	US-PATENT-CLASS-222-145	c 37	N76-19436 *	#	US-PATENT-CLASS-23-230R	c 23	N77-17161 *	#
US-PATENT-CLASS-219-203	c 11	N73-12265 *	#	US-PATENT-CLASS-222-193	c 37	N74-13178 *	#	US-PATENT-CLASS-23-230	c 06	N71-23527 *	#
US-PATENT-CLASS-219-203	c 27	N84-33589 *	#	US-PATENT-CLASS-222-309	c 15	N72-21465 *	#	US-PATENT-CLASS-23-230	c 06	N72-17095 *	#
US-PATENT-CLASS-219-209	c 35	N81-26431 *	#	US-PATENT-CLASS-222-309	c 54	N74-12779 *	#	US-PATENT-CLASS-23-231	c 23	N77-17161 *	#
US-PATENT-CLASS-219-210	c 35	N81-26431 *	#	US-PATENT-CLASS-222-309	c 35	N85-21595 *	#	US-PATENT-CLASS-23-232C	c 06	N72-17094 *	#
US-PATENT-CLASS-219-216	c 35	N74-15831 *	#	US-PATENT-CLASS-222-324	c 54	N74-17853 *	#	US-PATENT-CLASS-23-232C	c 25	N76-18245 *	#
US-PATENT-CLASS-219-219	c 27	N84-33589 *	#	US-PATENT-CLASS-222-340	c 54	N74-12779 *	#	US-PATENT-CLASS-23-232C	c 23	N77-17161 *	#
US-PATENT-CLASS-219-221	c 15	N72-11392 *	#	US-PATENT-CLASS-222-387	c 35	N85-21595 *	#	US-PATENT-CLASS-23-232E	c 06	N73-16106 *	#
US-PATENT-CLASS-219-221	c 37	N85-29286 *	#	US-PATENT-CLASS-222-389	c 15	N70-38996 *	#	US-PATENT-CLASS-23-232E	c 45	N76-31714 *	#
US-PATENT-CLASS-219-229	c 15	N71-27214 *	#	US-PATENT-CLASS							

US-PATENT-CLASS-23-252R	c 25	N74-12813 *	#	US-PATENT-CLASS-235-152	c 08	N73-12175 *	#	US-PATENT-CLASS-237-1A	c 44	N78-10554 *	#
US-PATENT-CLASS-23-252R	c 25	N78-10162 *	#	US-PATENT-CLASS-235-152	c 09	N73-13209 *	#	US-PATENT-CLASS-237-1A	c 44	N78-15560 *	#
US-PATENT-CLASS-23-252R	c 25	N79-28253 *	#	US-PATENT-CLASS-235-152	c 08	N73-26175 *	#	US-PATENT-CLASS-237-1A	c 44	N78-17480 *	#
US-PATENT-CLASS-23-253A	c 51	N77-27677 *	#	US-PATENT-CLASS-235-152	c 60	N77-14751 *	#	US-PATENT-CLASS-237-1A	c 44	N78-31525 *	#
US-PATENT-CLASS-23-253A	c 54	N78-14784 *	#	US-PATENT-CLASS-235-153AE	c 60	N76-21914 *	#	US-PATENT-CLASS-237-1A	c 44	N78-24433 *	#
US-PATENT-CLASS-23-253PC	c 06	N72-17094 *	#	US-PATENT-CLASS-235-153AK	c 62	N74-14920 *	#	US-PATENT-CLASS-237-80	c 34	N78-17317 *	#
US-PATENT-CLASS-23-253PC	c 37	N74-18123 *	#	US-PATENT-CLASS-235-153	c 08	N71-24633 *	#	US-PATENT-CLASS-238-134	c 85	N74-34672 *	#
US-PATENT-CLASS-23-253R	c 15	N72-21465 *	#	US-PATENT-CLASS-235-153	c 08	N72-22166 *	#	US-PATENT-CLASS-238-1	c 05	N71-28619 *	#
US-PATENT-CLASS-23-253R	c 25	N75-14844 *	#	US-PATENT-CLASS-235-154	c 08	N70-34778 *	#	US-PATENT-CLASS-239-DIG.23	c 37	N85-29283 *	#
US-PATENT-CLASS-23-253R	c 25	N78-18245 *	#	US-PATENT-CLASS-235-154	c 10	N71-23662 *	#	US-PATENT-CLASS-239-102	c 37	N80-10494 *	#
US-PATENT-CLASS-23-253	c 23	N71-16355 *	#	US-PATENT-CLASS-235-154	c 08	N72-18184 *	#	US-PATENT-CLASS-239-127.1	c 28	N71-23968 *	#
US-PATENT-CLASS-23-253	c 06	N71-26754 *	#	US-PATENT-CLASS-235-154	c 08	N72-25206 *	#	US-PATENT-CLASS-239-127.1	c 28	N73-32606 *	#
US-PATENT-CLASS-23-253	c 06	N72-17095 *	#	US-PATENT-CLASS-235-155	c 08	N71-24890 *	#	US-PATENT-CLASS-239-127.1	c 34	N79-13288 *	#
US-PATENT-CLASS-23-254EF	c 35	N76-18403 *	#	US-PATENT-CLASS-235-155	c 08	N72-21197 *	#	US-PATENT-CLASS-239-127.1	c 34	N79-13289 *	#
US-PATENT-CLASS-23-254E	c 06	N73-16106 *	#	US-PATENT-CLASS-235-155	c 08	N73-12176 *	#	US-PATENT-CLASS-239-127.1	c 34	N80-24573 *	#
US-PATENT-CLASS-23-254E	c 33	N75-26245 *	#	US-PATENT-CLASS-235-156	c 08	N71-18693 *	#	US-PATENT-CLASS-239-127.1	c 44	N81-24519 *	#
US-PATENT-CLASS-23-254E	c 35	N75-29380 *	#	US-PATENT-CLASS-235-156	c 60	N75-13539 *	#	US-PATENT-CLASS-239-127.3	c 20	N76-14191 *	#
US-PATENT-CLASS-23-254E	c 45	N76-21742 *	#	US-PATENT-CLASS-235-156	c 32	N76-21366 *	#	US-PATENT-CLASS-239-127.3	c 07	N80-32392 *	#
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US-PATENT-CLASS-23-254R	c 25	N76-18245 *	#	US-PATENT-CLASS-235-156	c 38	N78-17395 *	#	US-PATENT-CLASS-239-265.11	c 18	N71-21068 *	#
US-PATENT-CLASS-23-254R	c 23	N77-17161 *	#	US-PATENT-CLASS-235-156	c 38	N78-17396 *	#	US-PATENT-CLASS-239-265.11	c 07	N74-33218 *	#
US-PATENT-CLASS-23-254	c 14	N71-20442 *	#	US-PATENT-CLASS-235-158	c 08	N71-19437 *	#	US-PATENT-CLASS-239-265.11	c 07	N76-18117 *	#
US-PATENT-CLASS-23-255E	c 35	N75-29380 *	#	US-PATENT-CLASS-235-164	c 08	N71-33110 *	#	US-PATENT-CLASS-239-265.15	c 37	N79-22474 *	#
US-PATENT-CLASS-23-255R	c 25	N76-18245 *	#	US-PATENT-CLASS-235-164	c 08	N73-26175 *	#	US-PATENT-CLASS-239-265.17	c 07	N74-27490 *	#
US-PATENT-CLASS-23-259	c 15	N71-27372 *	#	US-PATENT-CLASS-235-164	c 60	N74-20836 *	#	US-PATENT-CLASS-239-265.17	c 07	N83-33884 *	#
US-PATENT-CLASS-23-259	c 15	N72-21465 *	#	US-PATENT-CLASS-235-175	c 08	N71-18602 *	#	US-PATENT-CLASS-239-265.17	c 71	N84-14873 *	#
US-PATENT-CLASS-23-259	c 37	N74-18123 *	#	US-PATENT-CLASS-235-175	c 08	N71-33110 *	#	US-PATENT-CLASS-239-265.19	c 28	N71-21493 *	#
US-PATENT-CLASS-23-259	c 51	N77-27677 *	#	US-PATENT-CLASS-235-176	c 08	N70-34787 *	#	US-PATENT-CLASS-239-265.19	c 28	N72-17108 *	#
US-PATENT-CLASS-23-277C	c 25	N74-33378 *	#	US-PATENT-CLASS-235-181	c 07	N71-21476 *	#	US-PATENT-CLASS-239-265.25	c 07	N78-27121 *	#
US-PATENT-CLASS-23-277R	c 44	N77-22607 *	#	US-PATENT-CLASS-235-181	c 07	N73-13149 *	#	US-PATENT-CLASS-239-265.25	c 09	N78-31129 *	#
US-PATENT-CLASS-23-277	c 26	N70-40015 *	#	US-PATENT-CLASS-235-181	c 35	N75-21582 *	#	US-PATENT-CLASS-239-265.33	c 07	N78-27121 *	#
US-PATENT-CLASS-23-281	c 29	N72-18766 *	#	US-PATENT-CLASS-235-181	c 33	N75-26243 *	#	US-PATENT-CLASS-239-265.33	c 07	N80-32392 *	#
US-PATENT-CLASS-23-281	c 25	N74-12813 *	#	US-PATENT-CLASS-235-181	c 43	N77-10584 *	#	US-PATENT-CLASS-239-265.39	c 07	N79-14097 *	#
US-PATENT-CLASS-23-281	c 44	N76-18642 *	#	US-PATENT-CLASS-235-181	c 38	N78-17395 *	#	US-PATENT-CLASS-239-265.43	c 28	N71-18224 *	#
US-PATENT-CLASS-23-281	c 44	N76-29700 *	#	US-PATENT-CLASS-235-183	c 08	N72-22165 *	#	US-PATENT-CLASS-239-265.43	c 28	N72-17108 *	#
US-PATENT-CLASS-23-281	c 44	N77-10636 *	#	US-PATENT-CLASS-235-184	c 74	N76-18913 *	#	US-PATENT-CLASS-239-288	c 37	N79-22474 *	#
US-PATENT-CLASS-23-281	c 44	N77-22607 *	#	US-PATENT-CLASS-235-186	c 10	N73-26230 *	#	US-PATENT-CLASS-239-288	c 37	N85-29283 *	#
US-PATENT-CLASS-23-284	c 35	N74-15127 *	#	US-PATENT-CLASS-235-194	c 09	N71-19480 *	#	US-PATENT-CLASS-239-302	c 37	N80-10494 *	#
US-PATENT-CLASS-23-288F	c 25	N74-12813 *	#	US-PATENT-CLASS-235-194	c 08	N72-22165 *	#	US-PATENT-CLASS-239-322	c 37	N85-29283 *	#
US-PATENT-CLASS-23-288J	c 25	N74-12813 *	#	US-PATENT-CLASS-235-194	c 10	N73-26230 *	#	US-PATENT-CLASS-239-327	c 37	N85-29283 *	#
US-PATENT-CLASS-23-288R	c 28	N80-10374 *	#	US-PATENT-CLASS-235-197	c 08	N72-22165 *	#	US-PATENT-CLASS-239-375	c 37	N85-29283 *	#
US-PATENT-CLASS-23-288	c 28	N72-18766 *	#	US-PATENT-CLASS-235-197	c 09	N72-23173 *	#	US-PATENT-CLASS-239-402.5	c 07	N85-35195 *	#
US-PATENT-CLASS-23-292	c 51	N77-27677 *	#	US-PATENT-CLASS-235-197	c 10	N73-20253 *	#	US-PATENT-CLASS-239-416	c 15	N69-23185 *	#
US-PATENT-CLASS-23-293R	c 28	N81-15119 *	#	US-PATENT-CLASS-235-197	c 10	N73-26230 *	#	US-PATENT-CLASS-239-416	c 15	N71-17654 *	#
US-PATENT-CLASS-23-295R	c 76	N85-29800 *	#	US-PATENT-CLASS-235-197	c 60	N75-13539 *	#	US-PATENT-CLASS-239-418	c 28	N72-23809 *	#
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US-PATENT-CLASS-23-302A	c 28	N80-23471 *	#	US-PATENT-CLASS-235-61.6	c 01	N71-13411 *	#	US-PATENT-CLASS-239-426	c 34	N84-12406 *	#
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US-PATENT-CLASS-23-302T	c 28	N80-23471 *	#	US-PATENT-CLASS-235-61INV	c 08	N72-11172 *	#	US-PATENT-CLASS-239-499	c 34	N82-13376 *	#
US-PATENT-CLASS-23-313R	c 71	N65-22104 *	#	US-PATENT-CLASS-235-61INV	c 35	N76-29552 *	#	US-PATENT-CLASS-239-543	c 28	N72-23809 *	#
US-PATENT-CLASS-23-35	c 06	N72-17093 *	#	US-PATENT-CLASS-235-70	c 04	N78-17031 *	#	US-PATENT-CLASS-239-562	c 43	N81-26509 *	#
US-PATENT-CLASS-23-88	c 06	N72-17093 *	#	US-PATENT-CLASS-235-78M	c 35	N76-29552 *	#	US-PATENT-CLASS-239-568	c 37	N84-16561 *	#
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US-PATENT-CLASS-230-221	c 11	N72-22245 *	#	US-PATENT-CLASS-235-92CC	c 08	N72-20176 *	#	US-PATENT-CLASS-239-601	c 34	N82-13376 *	#
US-PATENT-CLASS-230-54	c 11	N72-22245 *	#	US-PATENT-CLASS-235-92CT	c 38	N77-17495 *	#	US-PATENT-CLASS-239-690	c 28	N82-18401 *	#
US-PATENT-CLASS-233-DIG.1	c 34	N75-26282 *	#	US-PATENT-CLASS-235-92CV	c 08	N73-25206 *	#	US-PATENT-CLASS-24-126	c 15	N71-22994 *	#
US-PATENT-CLASS-233-11	c 15	N71-16079 *	#	US-PATENT-CLASS-235-92DE	c 08	N72-20176 *	#	US-PATENT-CLASS-24-134R	c 15	N73-25512 *	#
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US-PATENT-CLASS-235.150.27	c 04	N74-13420 *	#	US-PATENT-CLASS-235-92DN	c 38	N77-17495 *	#	US-PATENT-CLASS-24-263	c 15	N71-21076 *	#
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US-PATENT-CLASS-235-150.1	c 08	N71-29033 *	#	US-PATENT-CLASS-235-92EV	c 08	N73-25206 *	#	US-PATENT-CLASS-24-304	c 27	N85-20125 *	#
US-PATENT-CLASS-235-150.1	c 08	N72-31226 *	#	US-PATENT-CLASS-235-92FQ	c 08	N73-20217 *	#	US-PATENT-CLASS-24-447	c 27	N85-20125 *	#
US-PATENT-CLASS-235-150.1	c 32	N77-10392 *	#	US-PATENT-CLASS-235-92LG	c 08	N72-20176 *	#	US-PATENT-CLASS-24-450	c 27	N85-20125 *	#
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US-PATENT-CLASS-235-150.22	c 04	N74-13420 *	#	US-PATENT-CLASS-235-92MT	c 08	N72-31226 *	#	US-PATENT-CLASS-24-693	c 27	N85-20125 *	#
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US-PATENT-CLASS-235-150.25	c 35	N77-20399 *	#	US-PATENT-CLASS-235-92PC	c 35	N82-11431 *	#	US-PATENT-CLASS-240-11.2	c 09	N71-26787 *	#
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US-PATENT-CLASS-235-150.53	c 33	N75-26243 *	#	US-PATENT-CLASS-235-92T	c 03	N72-25020 *	#	US-PATENT-CLASS-242-107	c 33	N86-20669 *	#
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US-PATENT-CLASS-244-1SA	c 21	N72-21624 *	#	US-PATENT-CLASS-244-147	c 05	N85-21147 *	#	US-PATENT-CLASS-244-1	c 21	N70-35395 *	#
US-PATENT-CLASS-244-1SA	c 21	N72-25595 *	#	US-PATENT-CLASS-244-14	c 14	N70-33322 *	#	US-PATENT-CLASS-244-1	c 31	N70-36410 *	#
US-PATENT-CLASS-244-1SA	c 03	N73-20039 *	#	US-PATENT-CLASS-244-15.5	c 31	N72-18859 *	#	US-PATENT-CLASS-244-1	c 33	N70-36617 *	#
US-PATENT-CLASS-244-1SA	c 15	N73-25513 *	#	US-PATENT-CLASS-244-150	c 15	N71-24600 *	#	US-PATENT-CLASS-244-1	c 21	N70-36943 *	#
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US-PATENT-CLASS-244-1SB	c 15	N73-12486 *	#	US-PATENT-CLASS-244-155	c 31	N73-14854 *	#	US-PATENT-CLASS-244-1	c 31	N70-38676 *	#
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US-PATENT-CLASS-244-1SC	c 34	N75-12222 *	#	US-PATENT-CLASS-244-158-A	c 37	N85-30335 *	#	US-PATENT-CLASS-244-1	c 31	N70-41373 *	#
US-PATENT-CLASS-244-1SD	c 31	N73-26876 *	#	US-PATENT-CLASS-244-158-A	c 05	N86-19310 *	#	US-PATENT-CLASS-244-1	c 31	N70-41588 *	#
US-PATENT-CLASS-244-1SD	c 37	N74-27903 *	#	US-PATENT-CLASS-244-158-R	c 05	N86-19310 *	#	US-PATENT-CLASS-244-1	c 31	N70-41631 *	#
US-PATENT-CLASS-244-1SD	c 15	N77-10112 *	#	US-PATENT-CLASS-244-158-R	c 18	N86-20469 *	#	US-PATENT-CLASS-244-1	c 31	N70-41855 *	#
US-PATENT-CLASS-244-1SS	c 11	N73-13257 *	#	US-PATENT-CLASS-244-158A	c 27	N82-24339 *	#	US-PATENT-CLASS-244-1	c 21	N70-41856 *	#
US-PATENT-CLASS-244-1SS	c 03	N73-20039 *	#	US-PATENT-CLASS-244-158A	c 27	N82-29456 *	#	US-PATENT-CLASS-244-1	c 31	N70-42075 *	#
US-PATENT-CLASS-244-1SS	c 14	N73-27378 *	#	US-PATENT-CLASS-244-158A	c 24	N82-32417 *	#	US-PATENT-CLASS-244-1	c 03	N71-11058 *	#
US-PATENT-CLASS-244-1SS	c 31	N73-30829 *	#	US-PATENT-CLASS-244-158A	c 24	N83-13172 *	#	US-PATENT-CLASS-244-1	c 33	N71-14035 *	#
US-PATENT-CLASS-244-1SS	c 31	N73-32750 *	#	US-PATENT-CLASS-244-158A	c 16	N84-22601 *	#	US-PATENT-CLASS-244-1	c 21	N71-14132 *	#
US-PATENT-CLASS-244-1SS	c 33	N73-32818 *	#	US-PATENT-CLASS-244-158A	c 27	N84-27886 *	#	US-PATENT-CLASS-244-1	c 21	N71-14159 *	#
US-PATENT-CLASS-244-1SS	c 18	N74-22136 *	#	US-PATENT-CLASS-244-158R	c 31	N81-25258 *	#	US-PATENT-CLASS-244-1	c 21	N71-15583 *	#
US-PATENT-CLASS-244-1SS	c 18	N74-27397 *	#	US-PATENT-CLASS-244-158R	c 16	N84-27784 *	#	US-PATENT-CLASS-244-1	c 31	N71-15663 *	#
US-PATENT-CLASS-244-1SS	c 73	N75-30876 *	#	US-PATENT-CLASS-244-158R	c 18	N85-29991 *	#	US-PATENT-CLASS-244-1	c 31	N71-15674 *	#
US-PATENT-CLASS-244-100	c 15	N70-34850 *	#	US-PATENT-CLASS-244-158R	c 37	N85-34401 *	#	US-PATENT-CLASS-244-1	c 31	N71-15676 *	#
US-PATENT-CLASS-244-100	c 31	N70-36654 *	#	US-PATENT-CLASS-244-158	c 37	N76-22540 *	#	US-PATENT-CLASS-244-1	c 02	N71-16087 *	#
US-PATENT-CLASS-244-100	c 31	N70-36845 *	#	US-PATENT-CLASS-244-158	c 27	N79-12221 *	#	US-PATENT-CLASS-244-1	c 31	N71-16222 *	#
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US-PATENT-CLASS-244-114	c 21	N72-22619 *	#	US-PATENT-CLASS-244-161	c 18	N76-14186 *	#	US-PATENT-CLASS-244-1	c 31	N71-21881 *	#
US-PATENT-CLASS-244-115	c 18	N83-29303 *	#	US-PATENT-CLASS-244-161	c 37	N76-22540 *	#	US-PATENT-CLASS-244-1	c 33	N71-22792 *	#
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US-PATENT-CLASS-244-117	c 31	N70-33242 *	#	US-PATENT-CLASS-244-161	c 18	N84-22605 *	#	US-PATENT-CLASS-244-1	c 15	N71-24600 *	#
US-PATENT-CLASS-244-117	c 33	N72-17947 *	#	US-PATENT-CLASS-244-162	c 16	N86-26352 *	#	US-PATENT-CLASS-244-1	c 05	N71-24728 *	#
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US-PATENT-CLASS-244-119	c 24	N82-26384 *	#	US-PATENT-CLASS-244-163	c 05	N81-26114 *	#	US-PATENT-CLASS-244-1	c 21	N71-27324 *	#
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US-PATENT-CLASS-244-121	c 27	N79-12221 *	#	US-PATENT-CLASS-244-165	c 35	N85-29214 *	#	US-PATENT-CLASS-244-1	c 31	N71-29050 *	#
US-PATENT-CLASS-244-121	c 24	N79-25142 *	#	US-PATENT-CLASS-244-165	c 15	N76-14158 *	#	US-PATENT-CLASS-244-1	c 31	N71-33160 *	#
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US-PATENT-CLASS-247-171	c 35	N75-23910 *	#	US-PATENT-CLASS-250-205	c 36	N74-13205 *	#	US-PATENT-CLASS-250-281	c 35	N74-34857 *	#
US-PATENT-CLASS-248-119	c 11	N70-35383 *	#	US-PATENT-CLASS-250-206	c 10	N71-20782 *	#	US-PATENT-CLASS-250-281	c 35	N76-16393 *	#
US-PATENT-CLASS-248-14	c 15	N72-17454 *	#	US-PATENT-CLASS-250-207	c 14	N72-17328 *	#	US-PATENT-CLASS-250-281	c 36	N77-26477 *	#
US-PATENT-CLASS-248-16	c 18	N74-27397 *	#	US-PATENT-CLASS-250-207	c 14	N73-32317 *	#	US-PATENT-CLASS-250-281	c 72	N80-14877 *	#
US-PATENT-CLASS-248-178	c 15	N70-41310 *	#	US-PATENT-CLASS-250-207	c 33	N74-27682 *	#	US-PATENT-CLASS-250-282	c 36	N77-26477 *	#
US-PATENT-CLASS-248-178	c 37	N78-27425 *	#	US-PATENT-CLASS-250-208	c 14	N72-20379 *	#	US-PATENT-CLASS-250-282	c 72	N80-14877 *	#
US-PATENT-CLASS-248-183	c 14	N71-26627 *	#	US-PATENT-CLASS-250-209	c 07	N69-39980 *	#	US-PATENT-CLASS-250-282	c 35	N83-27184 *	#
US-PATENT-CLASS-248-183	c 15	N72-11									

US-PATENT-CLASS-250-291	c 35	N77-10492 *	#	US-PATENT-CLASS-250-373	c 45	N76-17656 *	#	US-PATENT-CLASS-250-52	c 11	N71-23042 *
US-PATENT-CLASS-250-295	c 35	N74-34857 *	#	US-PATENT-CLASS-250-374	c 35	N74-26949 *	#	US-PATENT-CLASS-250-52	c 24	N72-11595 *
US-PATENT-CLASS-250-296	c 35	N84-28016 *	#	US-PATENT-CLASS-250-374	c 35	N85-34374 *	#	US-PATENT-CLASS-250-52	c 23	N73-13662 *
US-PATENT-CLASS-250-298	c 35	N77-14406 *	#	US-PATENT-CLASS-250-379	c 35	N85-34374 *	#	US-PATENT-CLASS-250-531	c 25	N78-25148 *
US-PATENT-CLASS-250-304	c 25	N74-26947 *	#	US-PATENT-CLASS-250-385	c 35	N74-26949 *	#	US-PATENT-CLASS-250-531	c 33	N79-15245 *
US-PATENT-CLASS-250-305	c 72	N84-28575 *	#	US-PATENT-CLASS-250-385	c 35	N75-27331 *	#	US-PATENT-CLASS-250-540	c 33	N79-15245 *
US-PATENT-CLASS-250-307	c 25	N80-20334 *	#	US-PATENT-CLASS-250-385	c 35	N76-15433 *	#	US-PATENT-CLASS-250-541	c 33	N79-15245 *
US-PATENT-CLASS-250-308	c 25	N80-20334 *	#	US-PATENT-CLASS-250-385	c 35	N76-16393 *	#	US-PATENT-CLASS-250-551	c 74	N79-34011 *
US-PATENT-CLASS-250-310	c 35	N78-10429 *	#	US-PATENT-CLASS-250-385	c 35	N82-24471 *	#	US-PATENT-CLASS-250-563	c 38	N78-17396 *
US-PATENT-CLASS-250-310	c 33	N80-14332 *	#	US-PATENT-CLASS-250-385	c 35	N84-33765 *	#	US-PATENT-CLASS-250-566	c 74	N75-25706 *
US-PATENT-CLASS-250-311	c 33	N83-18996 *	#	US-PATENT-CLASS-250-386	c 35	N82-24471 *	#	US-PATENT-CLASS-250-571	c 36	N78-14380 *
US-PATENT-CLASS-250-320	c 74	N78-15880 *	#	US-PATENT-CLASS-250-388	c 33	N83-24763 *	#	US-PATENT-CLASS-250-572	c 38	N78-17395 *
US-PATENT-CLASS-250-322	c 35	N78-15461 *	#	US-PATENT-CLASS-250-389	c 35	N82-24471 *	#	US-PATENT-CLASS-250-572	c 38	N78-17396 *
US-PATENT-CLASS-250-330	c 44	N82-32841 *	#	US-PATENT-CLASS-250-394	c 14	N73-30392 *	#	US-PATENT-CLASS-250-573	c 74	N76-20958 *
US-PATENT-CLASS-250-332	c 35	N75-19613 *	#	US-PATENT-CLASS-250-394	c 19	N74-29410 *	#	US-PATENT-CLASS-250-573	c 34	N83-31993 *
US-PATENT-CLASS-250-332	c 31	N78-25256 *	#	US-PATENT-CLASS-250-396	c 35	N77-14408 *	#	US-PATENT-CLASS-250-574	c 45	N76-21742 *
US-PATENT-CLASS-250-332	c 35	N82-31659 *	#	US-PATENT-CLASS-250-398	c 35	N78-10429 *	#	US-PATENT-CLASS-250-574	c 36	N77-25501 *
US-PATENT-CLASS-250-332	c 74	N83-19597 *	#	US-PATENT-CLASS-250-400	c 25	N76-29379 *	#	US-PATENT-CLASS-250-576	c 35	N74-27860 *
US-PATENT-CLASS-250-332	c 74	N84-28590 *	#	US-PATENT-CLASS-250-400	c 25	N78-27226 *	#	US-PATENT-CLASS-250-578	c 36	N75-19652 *
US-PATENT-CLASS-250-335	c 34	N76-18374 *	#	US-PATENT-CLASS-250-41.9D	c 14	N72-29464 *	#	US-PATENT-CLASS-250-65F	c 15	N72-25452 *
US-PATENT-CLASS-250-336.1	c 72	N86-33127 *	#	US-PATENT-CLASS-250-41.9G	c 14	N73-12444 *	#	US-PATENT-CLASS-250-65F	c 14	N73-30389 *
US-PATENT-CLASS-250-336	c 14	N73-28488 *	#	US-PATENT-CLASS-250-41.9S	c 14	N73-12444 *	#	US-PATENT-CLASS-250-71.5R	c 14	N72-29464 *
US-PATENT-CLASS-250-336	c 35	N76-15433 *	#	US-PATENT-CLASS-250-41.9S	c 14	N71-28992 *	#	US-PATENT-CLASS-250-71.5	c 14	N72-17328 *
US-PATENT-CLASS-250-336	c 33	N76-27473 *	#	US-PATENT-CLASS-250-41.9	c 06	N71-13461 *	#	US-PATENT-CLASS-250-71.1R	c 06	N78-17395 *
US-PATENT-CLASS-250-336	c 35	N78-13400 *	#	US-PATENT-CLASS-250-41.9	c 24	N71-16095 *	#	US-PATENT-CLASS-250-71	c 14	N70-41676 *
US-PATENT-CLASS-250-338	c 35	N74-18088 *	#	US-PATENT-CLASS-250-41.9	c 14	N71-23041 *	#	US-PATENT-CLASS-250-83.3H	c 14	N72-21408 *
US-PATENT-CLASS-250-338	c 35	N77-10493 *	#	US-PATENT-CLASS-250-41.9	c 14	N71-28863 *	#	US-PATENT-CLASS-250-83.3H	c 14	N72-24477 *
US-PATENT-CLASS-250-338	c 47	N77-10753 *	#	US-PATENT-CLASS-250-41.9	c 14	N72-17328 *	#	US-PATENT-CLASS-250-83.3H	c 14	N73-12445 *
US-PATENT-CLASS-250-338	c 35	N80-26635 *	#	US-PATENT-CLASS-250-41.9	c 14	N73-32325 *	#	US-PATENT-CLASS-250-83.3H	c 14	N73-20475 *
US-PATENT-CLASS-250-338	c 35	N83-21311 *	#	US-PATENT-CLASS-250-416TV	c 35	N78-15461 *	#	US-PATENT-CLASS-250-83.3H	c 14	N73-25462 *
US-PATENT-CLASS-250-338	c 74	N84-28590 *	#	US-PATENT-CLASS-250-423P	c 36	N77-26477 *	#	US-PATENT-CLASS-250-83.3R	c 14	N73-12445 *
US-PATENT-CLASS-250-338	c 72	N86-33127 *	#	US-PATENT-CLASS-250-423P	c 25	N78-25148 *	#	US-PATENT-CLASS-250-83.3R	c 14	N73-20477 *
US-PATENT-CLASS-250-339	c 35	N77-10493 *	#	US-PATENT-CLASS-250-423P	c 72	N80-14877 *	#	US-PATENT-CLASS-250-83.3R	c 14	N73-32317 *
US-PATENT-CLASS-250-339	c 47	N77-10753 *	#	US-PATENT-CLASS-250-423	c 35	N76-15431 *	#	US-PATENT-CLASS-250-83.3UV	c 10	N72-17173 *
US-PATENT-CLASS-250-339	c 35	N84-33766 *	#	US-PATENT-CLASS-250-423	c 35	N76-16393 *	#	US-PATENT-CLASS-250-83.3UV	c 14	N72-25409 *
US-PATENT-CLASS-250-339	c 36	N85-21631 *	#	US-PATENT-CLASS-250-423	c 35	N83-27184 *	#	US-PATENT-CLASS-250-83.3UV	c 06	N78-17395 *
US-PATENT-CLASS-250-339	c 36	N85-29264 *	#	US-PATENT-CLASS-250-426	c 33	N85-21491 *	#	US-PATENT-CLASS-250-83.3	c 21	N70-33181 *
US-PATENT-CLASS-250-340	c 35	N76-29551 *	#	US-PATENT-CLASS-250-427	c 72	N80-27163 *	#	US-PATENT-CLASS-250-83.3	c 21	N70-34297 *
US-PATENT-CLASS-250-340	c 74	N83-19597 *	#	US-PATENT-CLASS-250-429	c 25	N76-29379 *	#	US-PATENT-CLASS-250-83.3	c 14	N71-15599 *
US-PATENT-CLASS-250-340	c 72	N86-33127 *	#	US-PATENT-CLASS-250-429	c 25	N78-27226 *	#	US-PATENT-CLASS-250-83.3	c 14	N71-18699 *
US-PATENT-CLASS-250-343	c 35	N74-11284 *	#	US-PATENT-CLASS-250-43.5FC	c 14	N72-11365 *	#	US-PATENT-CLASS-250-83.3	c 14	N71-21088 *
US-PATENT-CLASS-250-343	c 25	N74-26947 *	#	US-PATENT-CLASS-250-43.5R	c 14	N71-21090 *	#	US-PATENT-CLASS-250-83.3	c 09	N71-22985 *
US-PATENT-CLASS-250-343	c 45	N75-27585 *	#	US-PATENT-CLASS-250-43.5R	c 14	N72-41408 *	#	US-PATENT-CLASS-250-83.3	c 14	N71-25901 *
US-PATENT-CLASS-250-343	c 74	N76-20958 *	#	US-PATENT-CLASS-250-43.5R	c 06	N72-25146 *	#	US-PATENT-CLASS-250-83.3	c 14	N71-26475 *
US-PATENT-CLASS-250-343	c 25	N76-22323 *	#	US-PATENT-CLASS-250-43.5R	c 06	N72-31141 *	#	US-PATENT-CLASS-250-83.3	c 14	N71-27323 *
US-PATENT-CLASS-250-343	c 35	N77-14411 *	#	US-PATENT-CLASS-250-43.5	c 27	N71-16348 *	#	US-PATENT-CLASS-250-83.3	c 14	N72-17328 *
US-PATENT-CLASS-250-343	c 35	N78-13400 *	#	US-PATENT-CLASS-250-43.5	c 15	N71-24896 *	#	US-PATENT-CLASS-250-83.3	c 35	N75-27329 *
US-PATENT-CLASS-250-343	c 25	N81-14015 *	#	US-PATENT-CLASS-250-43.5	c 14	N71-25901 *	#	US-PATENT-CLASS-250-83.6R	c 14	N71-27090 *
US-PATENT-CLASS-250-343	c 35	N84-34705 *	#	US-PATENT-CLASS-250-432R	c 25	N76-22323 *	#	US-PATENT-CLASS-250-83.6R	c 14	N72-20381 *
US-PATENT-CLASS-250-343	c 36	N85-21631 *	#	US-PATENT-CLASS-250-432	c 45	N75-27585 *	#	US-PATENT-CLASS-250-83.6R	c 25	N72-33696 *
US-PATENT-CLASS-250-344	c 25	N76-22323 *	#	US-PATENT-CLASS-250-444	c 52	N77-14737 *	#	US-PATENT-CLASS-250-83.6R	c 74	N81-19898 *
US-PATENT-CLASS-250-344	c 74	N78-17867 *	#	US-PATENT-CLASS-250-457	c 35	N80-28686 *	#	US-PATENT-CLASS-250-83.6	c 10	N70-41991 *
US-PATENT-CLASS-250-345	c 45	N75-27585 *	#	US-PATENT-CLASS-250-460	c 37	N75-26372 *	#	US-PATENT-CLASS-250-83CD	c 91	N74-13130 *
US-PATENT-CLASS-250-347	c 35	N77-10493 *	#	US-PATENT-CLASS-250-474.1	c 35	N83-21311 *	#	US-PATENT-CLASS-250-83R	c 14	N73-12445 *
US-PATENT-CLASS-250-347	c 47	N77-10753 *	#	US-PATENT-CLASS-250-475	c 35	N79-10389 *	#	US-PATENT-CLASS-250-83R	c 14	N73-20477 *
US-PATENT-CLASS-250-347	c 74	N80-33210 *	#	US-PATENT-CLASS-250-483.1	c 35	N84-33765 *	#	US-PATENT-CLASS-250-83	c 14	N69-27484 *
US-PATENT-CLASS-250-350	c 25	N81-25159 *	#	US-PATENT-CLASS-250-483	c 74	N79-20857 *	#	US-PATENT-CLASS-250-83	c 14	N69-39937 *
US-PATENT-CLASS-250-350	c 74	N83-19597 *	#	US-PATENT-CLASS-250-483	c 74	N81-24900 *	#	US-PATENT-CLASS-250-83	c 09	N71-18830 *
US-PATENT-CLASS-250-351	c 35	N75-30502 *	#	US-PATENT-CLASS-250-489	c 35	N76-15433 *	#	US-PATENT-CLASS-250-83	c 05	N71-19440 *
US-PATENT-CLASS-250-351	c 35	N78-13400 *	#	US-PATENT-CLASS-250-49.5B	c 24	N72-11595 *	#	US-PATENT-CLASS-250-83	c 14	N71-20430 *
US-PATENT-CLASS-250-351	c 74	N83-19597 *	#	US-PATENT-CLASS-250-49.5TE	c 24	N72-11595 *	#	US-PATENT-CLASS-250-83	c 14	N71-23401 *
US-PATENT-CLASS-250-351	c 35	N84-34705 *	#	US-PATENT-CLASS-250-49.5	c 14	N69-39982 *	#	US-PATENT-CLASS-250-83	c 09	N71-27232 *
US-PATENT-CLASS-250-352	c 31	N79-17029 *	#	US-PATENT-CLASS-250-49.5	c 14	N71-28863 *	#	US-PATENT-CLASS-250-84	c 14	N71-24809 *
US-PATENT-CLASS-250-352	c 34	N79-20336 *	#	US-PATENT-CLASS-250-49.5	c 14	N72-17328 *	#	US-PATENT-CLASS-251-118	c 15	N71-18580 *
US-PATENT-CLASS-250-352	c 35	N80-26635 *	#	US-PATENT-CLASS-250-491	c 35	N80-28686 *	#	US-PATENT-CLASS-251-11	c 15	N70-35407 *
US-PATENT-CLASS-250-352	c 74	N80-33210 *	#	US-PATENT-CLASS-250-492A	c 33	N80-14332 *	#	US-PATENT-CLASS-251-120	c 37	N74-21065 *
US-PATENT-CLASS-250-353	c 35	N76-29551 *	#	US-PATENT-CLASS-250-492B	c 25	N78-27226 *	#	US-PATENT-CLASS-251-121	c 15	N71-18580 *
US-PATENT-CLASS-250-353	c 35	N80-26635 *	#	US-PATENT-CLASS-250-492R	c 25	N76-29379 *	#	US-PATENT-CLASS-251-122	c 15	N73-13462 *
US-PATENT-CLASS-250-353	c 74	N80-33210 *	#	US-PATENT-CLASS-250-492R	c 28	N78-24365 *	#	US-PATENT-CLASS-251-122	c 37	N74-21065 *
US-PATENT-CLASS-250-356.1	c 47	N84-28292 *	#	US-PATENT-CLASS-250-492	c 35	N74-15091 *	#	US-PATENT-CLASS-251-127	c 12	N71-18615 *
US-PATENT-CLASS-250-359	c 37	N75-26372 *	#	US-PATENT-CLASS-250-492	c 37	N75-26372 *	#	US-PATENT-CLASS-251-127	c 44	N84-14583 *
US-PATENT-CLASS-250-360	c 35	N74-15091 *	#	US-PATENT-CLASS-250-493	c 73	N75-30876 *	#	US-PATENT-CLASS-251-129	c 15	N72-20442 *
US-PATENT-CLASS-250-361	c 35	N74-15091 *	#	US-PATENT-CLASS-250-495	c 74	N75-12732 *	#	US-PATENT-CLASS-251-138	c 37	N80-23654 *
US-PATENT-CLASS-250-363R	c 52	N77-14737 *	#	US-PATENT-CLASS-250-496	c 73	N75-30876 *	#	US-PATENT-CLASS-251-148	c 15	N71-23024 *
US-PATENT-CLASS-250-363R	c 74	N79-20857 *	#	US-PATENT-CLASS-250-498	c 52	N77-14737 *	#	US-PATENT-CLASS-251-149.6	c 37	N76-14463 *
US-PATENT-CLASS-250-363S	c 74	N84-11920 *	#	US-PATENT-CLASS-250-499	c 73	N74-26767 *	#	US-PATENT-CLASS-251-149.9	c 37	N79-11402 *
US-PATENT-CLASS-250-363S	c 35	N85-30281 *	#	US-PATENT-CLASS-250-499	c 72	N76-15860 *	#	US-PATENT-CLASS-251-172	c 15	N71-21234 *
US-PATENT-CLASS-250-367	c 35	N84-33765 *	#	US-PATENT-CLASS-250-500	c 37	N78-13436 *	#	US-PATENT-CLASS-251-172	c 37	N79-33469 *
US-PATENT-CLASS-250-368	c 74	N81-24900 *	#	US-PATENT-CLASS-250-505	c 74	N74-27866 *	#	US-PATENT-CLASS-251-173	c 15	N70-33376 *
US-PATENT-CLASS-250-368	c 74	N84-11920 *	#	US-PATENT-CLASS-250-505	c 35	N75-19616 *	#	US-PATENT-CLASS-251-210	c 37	N74-21065 *
US-PATENT-CLASS-250-369	c 35	N74-15091 *	#	US-PATENT-CLASS-250-508	c 35	N75-19616 *	#	US-PATENT-CLASS-251-216	c 37	N81-17433 *
US-PATENT-CLASS-250-369	c 35	N82-32659 *	#	US-PATENT-CLASS-250-515	c 23	N73-13662 *	#	US-PATENT-CLASS-251-265	c 37	N85-20338 *
US-PATENT-CLASS-250-369	c 35	N85-30281 *	#	US-PATENT-CLASS-250-515	c 14	N73-28491 *	#	US-PATENT-CLASS-251-267	c 37	N85-20338 *
US-PATENT-CLASS-250-370	c 35	N74-18088 *	#	US-PATENT-CLASS-250-510	c 35	N75-19616 *	#	US-PATENT-CLASS-251-297	c 37	N85-20338 *
US-PATENT-CLASS-250-370	c 33	N75-31332 *	#	US-PATENT-CLASS-250-511	c 74	N74-27866 *	#	US-PATENT-CLASS-251-31	c 15	N71-19485 *
US-PATENT-CLASS-250-370	c 35	N82-31659 *	#	US-PATENT-CLASS-250-513	c 35	N80-28686 *	#	US-PATENT-CLASS-251-325	c 37	N85-29284 *
US-PATENT-CLASS-250-370	c 44	N82-32841 *	#	US-PATENT-CLASS-250-518	c 14	N73-30392 *	#	US-PATENT-CLASS-251-331	c 15	N72-31483 *
US-PATENT-CLASS-250-371	c 35	N74-18088 *	#	US-PATENT-CLASS-250-51	c 24	N72-11595 *	#	US-PATENT-CLASS-251-333	c 15	N70-34859 *
US-PATENT-CLASS-250-372	c 19	N74-29410 *	#	US-PATENT-CLASS-250-527	c 37	N76-18458 *	#	US-PATENT-CLASS-251-333	c 12	N71-18615 *
US-PATENT-CLASS-250-372	c 24	N76-24363 *	#	US-PATENT-CLASS-250-527	c 25	N77-32255				



US-PATENT-CLASS-251-358	c 15	N71-17648 *	US-PATENT-CLASS-260-2.2R	c 25	N81-19244 *	US-PATENT-CLASS-260-46.5E	c 06	N72-25151 *
US-PATENT-CLASS-251-380	c 15	N72-25451 *	US-PATENT-CLASS-260-2.5AK	c 27	N76-15310 *	US-PATENT-CLASS-260-46.5G	c 06	N72-25151 *
US-PATENT-CLASS-251-61.1	c 12	N71-18615 *	US-PATENT-CLASS-260-2.5AK	c 24	N78-24290 *	US-PATENT-CLASS-260-46.5P	c 06	N72-25151 *
US-PATENT-CLASS-251-81	c 15	N71-10778 *	US-PATENT-CLASS-260-2.5AM	c 27	N74-12812 *	US-PATENT-CLASS-260-46.5R	c 06	N73-26100 *
US-PATENT-CLASS-251-7	c 37	N79-28550 *	US-PATENT-CLASS-260-2.5AM	c 27	N77-31308 *	US-PATENT-CLASS-260-46.5	c 06	N71-11237 *
US-PATENT-CLASS-251-86	c 15	N72-31483 *	US-PATENT-CLASS-260-2.5AP	c 24	N78-24290 *	US-PATENT-CLASS-260-46.5	c 06	N71-11240 *
US-PATENT-CLASS-251-86	c 37	N80-23654 *	US-PATENT-CLASS-260-2.5AY	c 27	N77-31308 *	US-PATENT-CLASS-260-46.5S	c 27	N81-24256 *
US-PATENT-CLASS-252-12.2	c 24	N79-17916 *	US-PATENT-CLASS-260-2.5B	c 24	N77-31308 *	US-PATENT-CLASS-260-46.5.5R	c 27	N84-22744 *
US-PATENT-CLASS-252-12	c 15	N71-23810 *	US-PATENT-CLASS-260-2.5BE	c 24	N78-24290 *	US-PATENT-CLASS-260-46.5.6	c 27	N84-22744 *
US-PATENT-CLASS-252-12	c 24	N78-22309 *	US-PATENT-CLASS-260-2.5B	c 24	N78-24290 *	US-PATENT-CLASS-260-47CP	c 06	N73-27980 *
US-PATENT-CLASS-252-182.1	c 33	N84-14422 *	US-PATENT-CLASS-260-2.5FP	c 24	N77-31308 *	US-PATENT-CLASS-260-47CP	c 23	N78-15268 *
US-PATENT-CLASS-252-26	c 15	N71-21403 *	US-PATENT-CLASS-260-2.5FP	c 06	N72-25147 *	US-PATENT-CLASS-260-47CP	c 27	N78-31232 *
US-PATENT-CLASS-252-26	c 15	N71-24046 *	US-PATENT-CLASS-260-2.5FP	c 27	N74-27037 *	US-PATENT-CLASS-260-47CP	c 27	N78-32261 *
US-PATENT-CLASS-252-2	c 25	N83-36118 *	US-PATENT-CLASS-260-2.5FP	c 24	N78-24290 *	US-PATENT-CLASS-260-47UP	c 06	N73-32029 *
US-PATENT-CLASS-252-300	c 14	N72-22443 *	US-PATENT-CLASS-260-2.5F	c 18	N73-13562 *	US-PATENT-CLASS-260-47	c 06	N71-28620 *
US-PATENT-CLASS-252-300	c 24	N76-24363 *	US-PATENT-CLASS-260-2.5F	c 27	N74-12814 *	US-PATENT-CLASS-260-47	c 06	N71-28807 *
US-PATENT-CLASS-252-301.1R	c 35	N79-10389 *	US-PATENT-CLASS-260-2.5N	c 24	N78-15180 *	US-PATENT-CLASS-260-485F	c 06	N73-30098 *
US-PATENT-CLASS-252-301.16	c 35	N79-10389 *	US-PATENT-CLASS-260-2.5N	c 27	N78-31232 *	US-PATENT-CLASS-260-49	c 27	N78-32261 *
US-PATENT-CLASS-252-301.2	c 18	N71-27170 *	US-PATENT-CLASS-260-2.5R	c 27	N74-27037 *	US-PATENT-CLASS-260-520	c 23	N75-30256 *
US-PATENT-CLASS-252-301.4	c 06	N73-30097 *	US-PATENT-CLASS-260-2.5R	c 24	N78-15180 *	US-PATENT-CLASS-260-535H	c 06	N72-27144 *
US-PATENT-CLASS-252-305	c 06	N73-30097 *	US-PATENT-CLASS-260-2.5	c 06	N71-11242 *	US-PATENT-CLASS-260-53	c 27	N79-28307 *
US-PATENT-CLASS-252-359A	c 37	N77-13418 *	US-PATENT-CLASS-260-2.5	c 06	N71-24739 *	US-PATENT-CLASS-260-54-D	c 27	N86-21675 *
US-PATENT-CLASS-252-361	c 71	N83-35781 *	US-PATENT-CLASS-260-2.5	c 06	N71-25929 *	US-PATENT-CLASS-260-544F	c 06	N72-20121 *
US-PATENT-CLASS-252-364	c 28	N81-15119 *	US-PATENT-CLASS-260-2.5	c 18	N71-26155 *	US-PATENT-CLASS-260-544P	c 27	N86-24750 *
US-PATENT-CLASS-252-373	c 44	N76-29704 *	US-PATENT-CLASS-260-2.5	c 06	N72-25150 *	US-PATENT-CLASS-260-551P	c 27	N78-32256 *
US-PATENT-CLASS-252-373	c 44	N77-10636 *	US-PATENT-CLASS-260-2P	c 27	N78-32256 *	US-PATENT-CLASS-260-566B	c 27	N76-32315 *
US-PATENT-CLASS-252-408	c 14	N73-14428 *	US-PATENT-CLASS-260-2R	c 37	N74-18126 *	US-PATENT-CLASS-260-567.6M	c 06	N73-32029 *
US-PATENT-CLASS-252-422	c 45	N82-11634 *	US-PATENT-CLASS-260-2R	c 27	N74-27037 *	US-PATENT-CLASS-260-571	c 23	N76-15268 *
US-PATENT-CLASS-252-431N	c 06	N73-32029 *	US-PATENT-CLASS-260-2R	c 27	N78-15276 *	US-PATENT-CLASS-260-606-5P	c 27	N78-32256 *
US-PATENT-CLASS-252-431R	c 06	N73-32029 *	US-PATENT-CLASS-260-211.5	c 06	N72-25149 *	US-PATENT-CLASS-260-615	c 06	N71-27254 *
US-PATENT-CLASS-252-472	c 25	N78-10225 *	US-PATENT-CLASS-260-240G	c 27	N76-32315 *	US-PATENT-CLASS-260-615	c 06	N73-30101 *
US-PATENT-CLASS-252-514	c 05	N72-25120 *	US-PATENT-CLASS-260-245.75	c 27	N86-19455 *	US-PATENT-CLASS-260-63N	c 27	N78-31232 *
US-PATENT-CLASS-252-514	c 44	N79-31752 *	US-PATENT-CLASS-260-245.9	c 27	N86-19455 *	US-PATENT-CLASS-260-63N	c 27	N78-32261 *
US-PATENT-CLASS-252-514	c 25	N82-26396 *	US-PATENT-CLASS-260-28.5	c 27	N78-33228 *	US-PATENT-CLASS-260-63R	c 27	N78-32261 *
US-PATENT-CLASS-252-518	c 24	N79-14156 *	US-PATENT-CLASS-260-29.1R	c 24	N78-24290 *	US-PATENT-CLASS-260-65	c 06	N73-27980 *
US-PATENT-CLASS-252-549	c 23	N75-14834 *	US-PATENT-CLASS-260-29.6RB	c 25	N81-19242 *	US-PATENT-CLASS-260-65	c 23	N78-32261 *
US-PATENT-CLASS-252-58	c 18	N70-39897 *	US-PATENT-CLASS-260-29.6S	c 27	N74-17293 *	US-PATENT-CLASS-260-65	c 27	N82-29358 *
US-PATENT-CLASS-252-5	c 25	N83-33977 *	US-PATENT-CLASS-260-29.6S	c 27	N75-27125 *	US-PATENT-CLASS-260-67	c 27	N78-17214 *
US-PATENT-CLASS-252-5	c 25	N83-36118 *	US-PATENT-CLASS-260-2	c 06	N71-12143 *	US-PATENT-CLASS-260-67	c 27	N79-21191 *
US-PATENT-CLASS-252-62.3E	c 44	N80-24741 *	US-PATENT-CLASS-260-2	c 06	N71-20717 *	US-PATENT-CLASS-260-72.5	c 06	N71-11236 *
US-PATENT-CLASS-252-62.3E	c 44	N81-19558 *	US-PATENT-CLASS-260-2	c 06	N71-20905 *	US-PATENT-CLASS-260-72.5	c 06	N71-11239 *
US-PATENT-CLASS-252-62.3GA	c 25	N75-26043 *	US-PATENT-CLASS-260-2	c 06	N71-27363 *	US-PATENT-CLASS-260-72.5	c 06	N71-24740 *
US-PATENT-CLASS-252-62.3	c 26	N71-23292 *	US-PATENT-CLASS-260-2	c 06	N73-30102 *	US-PATENT-CLASS-260-75NH	c 27	N78-17213 *
US-PATENT-CLASS-252-62.3	c 76	N76-25049 *	US-PATENT-CLASS-260-2	c 27	N79-21190 *	US-PATENT-CLASS-260-75NH	c 27	N78-17213 *
US-PATENT-CLASS-252-62	c 27	N74-27037 *	US-PATENT-CLASS-260-30.2	c 06	N73-27980 *	US-PATENT-CLASS-260-75NT	c 27	N78-17213 *
US-PATENT-CLASS-252-70	c 23	N75-14834 *	US-PATENT-CLASS-260-30.4N	c 27	N78-17205 *	US-PATENT-CLASS-260-77.5AM	c 27	N78-17213 *
US-PATENT-CLASS-252-8.1	c 18	N73-26572 *	US-PATENT-CLASS-260-30.80S	c 06	N73-27980 *	US-PATENT-CLASS-260-77.5AN	c 27	N78-17213 *
US-PATENT-CLASS-252-8.1	c 27	N74-27037 *	US-PATENT-CLASS-260-307G	c 27	N79-22300 *	US-PATENT-CLASS-260-77.5AP	c 06	N72-27144 *
US-PATENT-CLASS-252-8.1	c 24	N78-14096 *	US-PATENT-CLASS-260-32.2R	c 27	N78-17205 *	US-PATENT-CLASS-260-77.5AP	c 06	N73-30076 *
US-PATENT-CLASS-253-317	c 44	N77-22606 *	US-PATENT-CLASS-260-32.6NT	c 27	N78-17205 *	US-PATENT-CLASS-260-77.5AP	c 27	N77-31308 *
US-PATENT-CLASS-253-39.15	c 15	N70-33226 *	US-PATENT-CLASS-260-32.6N	c 06	N73-27980 *	US-PATENT-CLASS-260-77.5AT	c 27	N78-17213 *
US-PATENT-CLASS-253-39.15	c 15	N70-33264 *	US-PATENT-CLASS-260-32.6N	c 23	N76-15268 *	US-PATENT-CLASS-260-77.5AT	c 27	N78-17213 *
US-PATENT-CLASS-253-39.15	c 28	N70-33372 *	US-PATENT-CLASS-260-32.8N	c 23	N76-15268 *	US-PATENT-CLASS-260-77.55P	c 27	N78-17213 *
US-PATENT-CLASS-253-39.1	c 33	N71-29152 *	US-PATENT-CLASS-260-326N	c 27	N81-17260 *	US-PATENT-CLASS-260-77.5	c 06	N73-30099 *
US-PATENT-CLASS-253-66	c 15	N70-36412 *	US-PATENT-CLASS-260-326S	c 27	N81-17260 *	US-PATENT-CLASS-260-77.5	c 06	N73-30100 *
US-PATENT-CLASS-253-66	c 28	N70-39895 *	US-PATENT-CLASS-260-33.4R	c 06	N73-27980 *	US-PATENT-CLASS-260-77.5	c 06	N73-30103 *
US-PATENT-CLASS-253-77	c 28	N71-28928 *	US-PATENT-CLASS-260-33.4R	c 27	N78-17205 *	US-PATENT-CLASS-260-78.41	c 27	N78-31232 *
US-PATENT-CLASS-253-77	c 28	N71-29154 *	US-PATENT-CLASS-260-33.4R	c 27	N81-19296 *	US-PATENT-CLASS-260-78TF	c 06	N73-27980 *
US-PATENT-CLASS-253	c 25	N79-28253 *	US-PATENT-CLASS-260-33.6P	c 24	N78-27180 *	US-PATENT-CLASS-260-78TF	c 27	N74-23125 *
US-PATENT-CLASS-254-124	c 20	N76-22296 *	US-PATENT-CLASS-260-33.6Q	c 24	N78-27180 *	US-PATENT-CLASS-260-78TF	c 23	N75-30256 *
US-PATENT-CLASS-254-131	c 60	N82-24839 *	US-PATENT-CLASS-260-33.6R	c 06	N73-27980 *	US-PATENT-CLASS-260-78TF	c 23	N78-32261 *
US-PATENT-CLASS-254-150	c 15	N71-24599 *	US-PATENT-CLASS-260-33.6UB	c 27	N81-15104 *	US-PATENT-CLASS-260-78UA	c 06	N71-11235 *
US-PATENT-CLASS-254-156	c 15	N73-25512 *	US-PATENT-CLASS-260-33.8EP	c 24	N78-27180 *	US-PATENT-CLASS-260-78	c 06	N71-11238 *
US-PATENT-CLASS-254-158	c 54	N77-21844 *	US-PATENT-CLASS-260-33.8F	c 27	N76-24405 *	US-PATENT-CLASS-260-80S	c 15	N79-26100 *
US-PATENT-CLASS-254-173	c 15	N71-24599 *	US-PATENT-CLASS-260-33.8F	c 25	N81-14016 *	US-PATENT-CLASS-260-85.5	c 06	N71-23500 *
US-PATENT-CLASS-254-186	c 15	N71-24599 *	US-PATENT-CLASS-260-33.8UA	c 24	N78-27180 *	US-PATENT-CLASS-260-858	c 27	N81-14076 *
US-PATENT-CLASS-254-190	c 15	N72-25453 *	US-PATENT-CLASS-260-340.9R	c 23	N82-16174 *	US-PATENT-CLASS-260-877	c 06	N72-22107 *
US-PATENT-CLASS-254-29A	c 15	N73-30457 *	US-PATENT-CLASS-260-346.3	c 23	N75-30256 *	US-PATENT-CLASS-260-879	c 27	N76-16228 *
US-PATENT-CLASS-254-93R	c 35	N74-13129 *	US-PATENT-CLASS-260-346.3	c 23	N80-32515 *	US-PATENT-CLASS-260-886	c 27	N81-14076 *
US-PATENT-CLASS-254-93R	c 20	N76-22296 *	US-PATENT-CLASS-260-346.3	c 06	N72-25148 *	US-PATENT-CLASS-260-890	c 27	N81-14076 *
US-PATENT-CLASS-256-13.1	c 37	N79-10420 *	US-PATENT-CLASS-260-348SC	c 06	N78-24290 *	US-PATENT-CLASS-260-895	c 27	N81-14076 *
US-PATENT-CLASS-256-1	c 37	N79-10420 *	US-PATENT-CLASS-260-37EP	c 24	N78-27180 *	US-PATENT-CLASS-260-900	c 27	N76-16228 *
US-PATENT-CLASS-256-308.2	c 27	N86-20561 *	US-PATENT-CLASS-260-37EP	c 24	N79-26100 *	US-PATENT-CLASS-260-901	c 27	N81-14076 *
US-PATENT-CLASS-259-DIG.18	c 35	N74-15093 *	US-PATENT-CLASS-260-37EP	c 15	N81-17260 *	US-PATENT-CLASS-260-908	c 27	N76-16228 *
US-PATENT-CLASS-259-4AC	c 37	N76-19436 *	US-PATENT-CLASS-260-37N	c 27	N79-28307 *	US-PATENT-CLASS-260-92.1	c 06	N72-25152 *
US-PATENT-CLASS-259-4	c 15	N73-19458 *	US-PATENT-CLASS-260-37	c 18	N71-25581 *	US-PATENT-CLASS-260-92.1	c 06	N76-24405 *
US-PATENT-CLASS-259-60	c 35	N74-15093 *	US-PATENT-CLASS-260-37	c 27	N81-24258 *	US-PATENT-CLASS-260-92.1	c 06	N80-10358 *
US-PATENT-CLASS-259-71	c 15	N71-21177 *	US-PATENT-CLASS-260-37	c 25	N82-24312 *	US-PATENT-CLASS-260-92.1	c 27	N86-19376 *
US-PATENT-CLASS-259-72	c 37	N74-18123 *	US-PATENT-CLASS-260-37	c 25	N74-27037 *	US-PATENT-CLASS-260-926	c 27	N73-32029 *
US-PATENT-CLASS-259-98	c 35	N74-15126 *	US-PATENT-CLASS-260-386	c 18	N71-15688 *	US-PATENT-CLASS-260-927-N	c 23	N73-32029 *
US-PATENT-CLASS-259/4R	c 34	N77-24423 *	US-PATENT-CLASS-260-389	c 25	N78-17215 *	US-PATENT-CLASS-260-93.5A	c 06	N73-32029 *
US-PATENT-CLASS-260.46.5E	c 27	N74-21156 *	US-PATENT-CLASS-260-396N	c 27	N78-27180 *	US-PATENT-CLASS-260-94.2M	c 06	N73-32029 *
JS-PATENT-CLASS-260-DIG.15	c 27	N78-14164 *	US-PATENT-CLASS-260-404.5	c 18	N71-15688 *	US-PATENT-CLASS-260-94.2R	c 06	N73-32029 *
JS-PATENT-CLASS-260-DIG.24	c 27	N74-27037 *	US-PATENT-CLASS-260-42.17	c 24	N78-27180 *	US-PATENT-CLASS-260-94.7R	c 06	N73-32029 *
JS-PATENT-CLASS-260-DIG.24	c 27	N76-24405 *	US-PATENT-CLASS-260-42.43	c 24	N78-27180 *	US-PATENT-CLASS-260-94.8	c 27	N73-22710 *
JS-PATENT-CLASS-260-DIG.29	c 27	N80-24438 *	US-PATENT-CLASS-260-429	c 06	N79-28307 *	US-PATENT-CLASS-260-959	c 27	N78-32256 *
JS-PATENT-CLASS-260-17.2	c 24	N80-26388 *	US-PATENT-CLASS-260-42	c 27	N79-28307 *	US-PATENT-CLASS-260-96D	c 28	N81-15119 *
JS-PATENT-CLASS-260-17.2	c 24	N81-13999 *	US-PATENT-CLASS-260-448.2D	c 06	N72-25151 *	US-PATENT-CLASS-261-DIG.75	c 34	N77-24423 *
JS-PATENT-CLASS-260-17.4UC	c 23	N81-29160 *	US-PATENT-CLASS-260-448.2D	c 06	N73-32030 *	US-PATENT-CLASS-261-118	c 31	N80-18231 *
JS-PATENT-CLASS-260-17A	c 27	N81-14076 *	US-PATENT-CLASS-260-448.2N	c 37	N74-21058 *	US-PATENT-CLASS-261-123	c 28	N72-22772 *
JS-PATENT-CLASS-260-18S	c 06	N72-25151 *	US-PATENT-CLASS-260-448.2	c 06	N71-23230 *	US-PATENT-CLASS-261-28	c 07	N81-29129 *
JS-PATENT-CLASS-260-2.1E	c 18	N72-22567 *	US-PATENT-CLASS-260-45.7R	c 24	N78-27180 *	US-PATENT-CLASS-261-78A	c 35	N86-29174 *
JS-PATENT-CLASS-260-2.1E	c 27	N81-14076 *	US-PATENT-CLASS-260-45.7R	c 27	N82-16238 *			
JS-PATENT-CLASS-260-2.1E	c 25	N81-19244 *	US-PATENT-CLASS-260-45.75W	c 24	N78-27180 *			
JS-PATENT-CLASS-260-2.1	c 25	N81-17187 *	US-PATENT-CLASS-260-45.7	c 27	N76-24405 *			
JS-PATENT-CLASS-260-2.2R	c 25	N81-17187 *	US-PATENT-CLASS-260-45.85N	c 24	N78-27180 *			
			US-PATENT-CLASS-260-45.9R	c 24	N78-27180 *			



US-PATENT-CLASS-261-79A	c 54	N81-24724 *	#	US-PATENT-CLASS-264-34	c 44	N79-24432 *	#	US-PATENT-CLASS-277-224	c 37	N80-28711 *	#
US-PATENT-CLASS-263-48	c 15	N69-27483 *	#	US-PATENT-CLASS-264-35	c 44	N79-24432 *	#	US-PATENT-CLASS-277-229	c 37	N81-15363 *	#
US-PATENT-CLASS-264-DIG.36	c 18	N73-14584 *	#	US-PATENT-CLASS-264-36	c 15	N73-12489 *	#	US-PATENT-CLASS-277-25	c 15	N69-21362 *	#
US-PATENT-CLASS-264-DIG.44	c 15	N72-16329 *	#	US-PATENT-CLASS-264-36	c 32	N74-27612 *	#	US-PATENT-CLASS-277-25	c 15	N71-19570 *	#
US-PATENT-CLASS-264-DIG.65	c 27	N85-20124 *	#	US-PATENT-CLASS-264-37	c 28	N71-26779 *	#	US-PATENT-CLASS-277-25	c 15	N72-29488 *	#
US-PATENT-CLASS-264-102	c 15	N71-10672 *	#	US-PATENT-CLASS-264-40.4	c 35	N80-18357 *	#	US-PATENT-CLASS-277-25	c 37	N74-10474 *	#
US-PATENT-CLASS-264-102	c 15	N73-12489 *	#	US-PATENT-CLASS-264-40	c 15	N73-12489 *	#	US-PATENT-CLASS-277-25	c 07	N78-25090 *	#
US-PATENT-CLASS-264-102	c 31	N74-14133 *	#	US-PATENT-CLASS-264-41	c 25	N81-19244 *	#	US-PATENT-CLASS-277-27	c 15	N72-29488 *	#
US-PATENT-CLASS-264-102	c 31	N74-18124 *	#	US-PATENT-CLASS-264-41	c 51	N84-28361 *	#	US-PATENT-CLASS-277-27	c 37	N74-10474 *	#
US-PATENT-CLASS-264-102	c 37	N76-24575 *	#	US-PATENT-CLASS-264-453	c 25	N82-21268 *	#	US-PATENT-CLASS-277-27	c 37	N74-15125 *	#
US-PATENT-CLASS-264-102	c 37	N79-26100 *	#	US-PATENT-CLASS-264-510	c 44	N79-24432 *	#	US-PATENT-CLASS-277-27	c 37	N75-21631 *	#
US-PATENT-CLASS-264-102	c 05	N72-25120 *	#	US-PATENT-CLASS-264-516	c 44	N79-24432 *	#	US-PATENT-CLASS-277-27	c 37	N82-12442 *	#
US-PATENT-CLASS-264-104	c 27	N81-24257 *	#	US-PATENT-CLASS-264-53	c 25	N82-21268 *	#	US-PATENT-CLASS-277-27	c 37	N82-24490 *	#
US-PATENT-CLASS-264-104	c 23	N81-29160 *	#	US-PATENT-CLASS-264-59	c 24	N84-16262 *	#	US-PATENT-CLASS-277-40	c 37	N75-21631 *	#
US-PATENT-CLASS-264-104	c 25	N83-13188 *	#	US-PATENT-CLASS-264-5	c 31	N81-33319 *	#	US-PATENT-CLASS-277-40	c 37	N82-12442 *	#
US-PATENT-CLASS-264-105	c 27	N81-24257 *	#	US-PATENT-CLASS-264-5	c 27	N82-28442 *	#	US-PATENT-CLASS-277-41	c 37	N76-22541 *	#
US-PATENT-CLASS-264-111	c 17	N71-29137 *	#	US-PATENT-CLASS-264-5	c 31	N83-35176 *	#	US-PATENT-CLASS-277-4	c 37	N76-22541 *	#
US-PATENT-CLASS-264-112	c 27	N85-20124 *	#	US-PATENT-CLASS-264-5	c 31	N83-35176 *	#	US-PATENT-CLASS-277-4	c 37	N82-24490 *	#
US-PATENT-CLASS-264-118	c 24	N80-26388 *	#	US-PATENT-CLASS-264-5	c 26	N86-32551 *	#	US-PATENT-CLASS-277-53	c 37	N86-20788 *	#
US-PATENT-CLASS-264-118	c 24	N84-16262 *	#	US-PATENT-CLASS-264-60	c 27	N76-22376 *	#	US-PATENT-CLASS-277-59	c 37	N82-24490 *	#
US-PATENT-CLASS-264-119	c 24	N80-26388 *	#	US-PATENT-CLASS-264-60	c 27	N79-14213 *	#	US-PATENT-CLASS-277-62	c 37	N79-22475 *	#
US-PATENT-CLASS-264-120	c 27	N85-20124 *	#	US-PATENT-CLASS-264-60	c 24	N84-16262 *	#	US-PATENT-CLASS-277-72R	c 37	N82-24490 *	#
US-PATENT-CLASS-264-124	c 24	N80-26388 *	#	US-PATENT-CLASS-264-63	c 27	N76-22376 *	#	US-PATENT-CLASS-277-74	c 15	N72-29488 *	#
US-PATENT-CLASS-264-129	c 37	N76-31524 *	#	US-PATENT-CLASS-264-65	c 18	N73-14584 *	#	US-PATENT-CLASS-277-74	c 37	N76-22541 *	#
US-PATENT-CLASS-264-12	c 31	N83-35176 *	#	US-PATENT-CLASS-264-66	c 27	N76-22376 *	#	US-PATENT-CLASS-277-80	c 37	N85-29284 *	#
US-PATENT-CLASS-264-130	c 27	N78-32262 *	#	US-PATENT-CLASS-264-70	c 44	N79-24432 *	#	US-PATENT-CLASS-277-81R	c 37	N82-16408 *	#
US-PATENT-CLASS-264-135	c 37	N74-18126 *	#	US-PATENT-CLASS-264-71	c 44	N79-24432 *	#	US-PATENT-CLASS-277-91	c 37	N74-15125 *	#
US-PATENT-CLASS-264-136	c 37	N74-18126 *	#	US-PATENT-CLASS-264-90	c 24	N78-17150 *	#	US-PATENT-CLASS-277-93R	c 37	N76-22541 *	#
US-PATENT-CLASS-264-137	c 27	N79-33316 *	#	US-PATENT-CLASS-264-92	c 15	N71-17803 *	#	US-PATENT-CLASS-277-93R	c 37	N82-12442 *	#
US-PATENT-CLASS-264-137	c 27	N81-14078 *	#	US-PATENT-CLASS-264-92	c 15	N72-24522 *	#	US-PATENT-CLASS-277-96.1	c 37	N79-22475 *	#
US-PATENT-CLASS-264-137	c 27	N81-29229 *	#	US-PATENT-CLASS-264-9	c 31	N81-33319 *	#	US-PATENT-CLASS-277-96	c 37	N74-10474 *	#
US-PATENT-CLASS-264-137	c 27	N83-34041 *	#	US-PATENT-CLASS-266-119	c 26	N83-31896 *	#	US-PATENT-CLASS-277-96	c 37	N81-24442 *	#
US-PATENT-CLASS-264-137	c 27	N85-20124 *	#	US-PATENT-CLASS-266-19	c 15	N80-28492 *	#	US-PATENT-CLASS-279-1B	c 37	N75-33395 *	#
US-PATENT-CLASS-264-145	c 15	N79-26100 *	#	US-PATENT-CLASS-266-249	c 26	N70-33382 *	#	US-PATENT-CLASS-279-3	c 37	N75-33395 *	#
US-PATENT-CLASS-264-151	c 15	N79-26100 *	#	US-PATENT-CLASS-266-24	c 17	N80-28492 *	#	US-PATENT-CLASS-279-89	c 37	N78-17383 *	#
US-PATENT-CLASS-264-152	c 27	N85-20124 *	#	US-PATENT-CLASS-266-274	c 26	N72-28535 *	#	US-PATENT-CLASS-280-150SB	c 05	N75-25915 *	#
US-PATENT-CLASS-264-157	c 24	N78-17150 *	#	US-PATENT-CLASS-267-150	c 37	N80-28492 *	#	US-PATENT-CLASS-280-432	c 37	N77-14477 *	#
US-PATENT-CLASS-264-161	c 37	N76-31524 *	#	US-PATENT-CLASS-267-166	c 34	N85-34401 *	#	US-PATENT-CLASS-280-805	c 37	N82-18601 *	#
US-PATENT-CLASS-264-175	c 15	N79-26100 *	#	US-PATENT-CLASS-267-1	c 15	N74-18552 *	#	US-PATENT-CLASS-285-DIG.21	c 15	N72-25450 *	#
US-PATENT-CLASS-264-184	c 27	N78-32262 *	#	US-PATENT-CLASS-267-64	c 15	N69-27504 *	#	US-PATENT-CLASS-285-DIG.21	c 33	N73-26958 *	#
US-PATENT-CLASS-264-1	c 44	N79-24432 *	#	US-PATENT-CLASS-267-8R	c 15	N71-21530 *	#	US-PATENT-CLASS-285-114	c 37	N75-19686 *	#
US-PATENT-CLASS-264-204	c 27	N86-29039 *	#	US-PATENT-CLASS-267-8R	c 37	N85-34401 *	#	US-PATENT-CLASS-285-159	c 37	N82-24494 *	#
US-PATENT-CLASS-264-211	c 27	N78-32262 *	#	US-PATENT-CLASS-269-152	c 18	N83-29303 *	#	US-PATENT-CLASS-285-168	c 54	N86-28619 *	#
US-PATENT-CLASS-264-212	c 27	N80-32516 *	#	US-PATENT-CLASS-269-153	c 44	N79-19447 *	#	US-PATENT-CLASS-285-168	c 54	N86-28620 *	#
US-PATENT-CLASS-264-212	c 27	N86-31727 *	#	US-PATENT-CLASS-269-156	c 37	N80-14398 *	#	US-PATENT-CLASS-285-168	c 54	N86-29507 *	#
US-PATENT-CLASS-264-216	c 25	N82-21268 *	#	US-PATENT-CLASS-269-21	c 37	N76-21554 *	#	US-PATENT-CLASS-285-184	c 54	N86-29507 *	#
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US-PATENT-CLASS-264-217	c 25	N75-12087 *	#	US-PATENT-CLASS-269-21	c 37	N78-27423 *	#	US-PATENT-CLASS-285-192	c 20	N78-24275 *	#
US-PATENT-CLASS-264-219	c 37	N76-31524 *	#	US-PATENT-CLASS-269-21	c 76	N80-18951 *	#	US-PATENT-CLASS-285-226	c 37	N75-19686 *	#
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US-PATENT-CLASS-264-221	c 15	N72-16329 *	#	US-PATENT-CLASS-269-242	c 18	N84-28083 *	#	US-PATENT-CLASS-285-227	c 54	N86-29507 *	#
US-PATENT-CLASS-264-225	c 15	N72-16329 *	#	US-PATENT-CLASS-269-242	c 37	N83-29303 *	#	US-PATENT-CLASS-285-235	c 54	N78-31735 *	#
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US-PATENT-CLASS-264-229	c 24	N81-29163 *	#	US-PATENT-CLASS-269-244	c 37	N84-28083 *	#	US-PATENT-CLASS-285-24	c 15	N71-10782 *	#
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US-PATENT-CLASS-264-236	c 27	N78-32262 *	#	US-PATENT-CLASS-272-498	c 15	N73-28515 *	#	US-PATENT-CLASS-285-331	c 15	N70-41629 *	#
US-PATENT-CLASS-264-236	c 27	N86-29039 *	#	US-PATENT-CLASS-272-DIG.1	c 05	N73-32014 *	#	US-PATENT-CLASS-285-33	c 15	N72-25450 *	#
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US-PATENT-CLASS-264-23	c 71	N78-10837 *	#	US-PATENT-CLASS-272-DIG.5	c 05	N73-32014 *	#	US-PATENT-CLASS-285-359	c 37	N79-11402 *	#
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US-PATENT-CLASS-264-258	c 24	N81-29163 *	#	US-PATENT-CLASS-272-73	c 05	N73-27941 *	#	US-PATENT-CLASS-285-401	c 37	N82-24494 *	#
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US-PATENT-CLASS-264-28	c 15	N73-12489 *	#	US-PATENT-CLASS-274-4R	c 09	N72-11224 *	#	US-PATENT-CLASS-287-189.365	c 15	N71-26312 *	#
US-PATENT-CLASS-264-294	c 31	N74-13177 *	#	US-PATENT-CLASS-277-105	c 37	N82-24490 *	#	US-PATENT-CLASS-287-189.36	c 11	N71-10799 *	#
US-PATENT-CLASS-264-3R	c 28	N77-10213 *	#	US-PATENT-CLASS-277-116.6	c 37	N84-11497 *	#	US-PATENT-CLASS-287-54A	c 11	N72-25287 *	#
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US-PATENT-CLASS-264-304	c 37	N76-31524 *	#	US-PATENT-CLASS-277-134	c 37	N75-21631 *	#	US-PATENT-CLASS-287-92	c 31	N73-32749 *	#
US-PATENT-CLASS-264-305	c 37	N76-31524 *	#	US-PATENT-CLASS-277-134	c 07	N78-25090 *	#	US-PATENT-CLASS-29-DIG.1	c 44	N81-14389 *	#
US-PATENT-CLASS-264-308	c 37	N76-31524 *	#	US-PATENT-CLASS-277-135	c 37	N85-29284 *	#	US-PATENT-CLASS-29-DIG.2	c 24	N75-33181 *	#
US-PATENT-CLASS-264-310	c 37	N76-31524 *	#	US-PATENT-CLASS-277-135	c 37	N85-29284 *	#	US-PATENT-CLASS-29-DIG.35	c 37	N77-23482 *	#
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US-PATENT-CLASS-264-318	c 37	N76-31524 *	#	US-PATENT-CLASS-277-153	c 37	N80-28711 *	#	US-PATENT-CLASS-29-125	c 37	N79-10422 *	#
US-PATENT-CLASS-264-331.12	c 27	N85-20124 *	#	US-PATENT-CLASS-277-153	c 37	N81-26447 *	#	US-PATENT-CLASS-29-148.4A	c 37	N74-15128 *	#
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US-PATENT-CLASS-29-182.1	c 18	N71-23710 *	US-PATENT-CLASS-29-495	c 15	N71-21078 *	US-PATENT-CLASS-29-623.5	c 44	N83-32176 *
US-PATENT-CLASS-29-182.2	c 17	N71-23046 *	US-PATENT-CLASS-29-497.5	c 15	N73-28515 *	US-PATENT-CLASS-29-623.5	c 26	N84-22734 *
US-PATENT-CLASS-29-182.2	c 37	N75-26371 *	US-PATENT-CLASS-29-497.5	c 15	N73-33383 *	US-PATENT-CLASS-29-623.5	c 44	N84-28205 *
US-PATENT-CLASS-29-182.5	c 17	N72-28536 *	US-PATENT-CLASS-29-497.5	c 37	N74-11300 *	US-PATENT-CLASS-29-624	c 15	N72-20444 *
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US-PATENT-CLASS-29-183.5	c 17	N70-38490 *	US-PATENT-CLASS-29-498	c 15	N73-33383 *	US-PATENT-CLASS-29-628	c 33	N77-26385 *
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US-PATENT-CLASS-29-194	c 44	N76-14595 *	US-PATENT-CLASS-29-498	c 37	N74-21055 *	US-PATENT-CLASS-29-630A	c 05	N72-25121 *
US-PATENT-CLASS-29-195A	c 27	N76-16229 *	US-PATENT-CLASS-29-502	c 09	N72-25261 *	US-PATENT-CLASS-29-630A	c 09	N73-28083 *
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US-PATENT-CLASS-29-196.2	c 26	N75-19408 *	US-PATENT-CLASS-29-517	c 15	N71-17650 *	US-PATENT-CLASS-29-764	c 60	N82-24839 *
US-PATENT-CLASS-29-196.6	c 17	N73-32414 *	US-PATENT-CLASS-29-521	c 26	N83-10170 *	US-PATENT-CLASS-29-809	c 44	N79-24431 *
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US-PATENT-CLASS-29-197	c 26	N75-19408 *	US-PATENT-CLASS-29-527.2	c 37	N74-11301 *	US-PATENT-CLASS-29-90-1R	c 44	N85-21769 *
US-PATENT-CLASS-29-197	c 44	N76-14595 *	US-PATENT-CLASS-29-527.2	c 24	N73-33181 *	US-PATENT-CLASS-29-90-4R	c 44	N85-21769 *
US-PATENT-CLASS-29-198	c 17	N70-33288 *	US-PATENT-CLASS-29-527.2	c 24	N77-19171 *	US-PATENT-CLASS-29-90-40	c 03	N71-11057 *
US-PATENT-CLASS-29-198	c 09	N72-25259 *	US-PATENT-CLASS-29-57-4	c 44	N79-24431 *	US-PATENT-CLASS-29-90-52	c 37	N77-32501 *
US-PATENT-CLASS-29-203H	c 37	N74-32918 *	US-PATENT-CLASS-29-570	c 26	N72-28781 *	US-PATENT-CLASS-29-90-52	c 37	N77-32501 *
US-PATENT-CLASS-29-203MW	c 33	N74-26977 *	US-PATENT-CLASS-29-571	c 35	N75-13213 *	US-PATENT-CLASS-29-90-53	c 44	N80-29834 *
US-PATENT-CLASS-29-203V	c 15	N73-14488 *	US-PATENT-CLASS-29-571	c 33	N78-27326 *	US-PATENT-CLASS-29-90-55	c 44	N84-23018 *
US-PATENT-CLASS-29-23.5	c 37	N78-24544 *	US-PATENT-CLASS-29-571	c 33	N81-26360 *	US-PATENT-CLASS-29-92-DIG.14	c 37	N75-19685 *
US-PATENT-CLASS-29-234	c 15	N70-36901 *	US-PATENT-CLASS-29-572	c 09	N71-23027 *	US-PATENT-CLASS-29-108	c 37	N75-19685 *
US-PATENT-CLASS-29-244	c 37	N78-24544 *	US-PATENT-CLASS-29-572	c 03	N71-24681 *	US-PATENT-CLASS-29-110	c 37	N77-32499 *
US-PATENT-CLASS-29-25.14	c 05	N72-25121 *	US-PATENT-CLASS-29-572	c 03	N72-22041 *	US-PATENT-CLASS-29-122	c 37	N75-19685 *
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US-PATENT-CLASS-29-25.18	c 09	N71-26678 *	US-PATENT-CLASS-29-572	c 44	N76-14800 *	US-PATENT-CLASS-29-14-1R	c 35	N78-16392 *
US-PATENT-CLASS-29-25.18	c 05	N72-25121 *	US-PATENT-CLASS-29-572	c 44	N76-28635 *	US-PATENT-CLASS-29-14-106	c 37	N81-14320 *
US-PATENT-CLASS-29-25.18	c 20	N75-18310 *	US-PATENT-CLASS-29-572	c 44	N77-10635 *	US-PATENT-CLASS-29-14-113	c 37	N80-14398 *
US-PATENT-CLASS-29-25.18	c 20	N76-21276 *	US-PATENT-CLASS-29-572	c 44	N78-24608 *	US-PATENT-CLASS-29-14-116	c 37	N75-33395 *
US-PATENT-CLASS-29-25.35	c 35	N80-20559 *	US-PATENT-CLASS-29-572	c 44	N78-25527 *	US-PATENT-CLASS-29-14-116	c 37	N82-32731 *
US-PATENT-CLASS-29-25.42	c 26	N72-28762 *	US-PATENT-CLASS-29-572	c 44	N78-25528 *	US-PATENT-CLASS-29-14-15	c 15	N71-29133 *
US-PATENT-CLASS-29-252	c 37	N78-24544 *	US-PATENT-CLASS-29-572	c 44	N78-25529 *	US-PATENT-CLASS-29-14-19R	c 35	N76-16392 *
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US-PATENT-CLASS-29-267	c 60	N82-24839 *	US-PATENT-CLASS-29-572	c 44	N79-11472 *	US-PATENT-CLASS-29-14-86.33	c 37	N75-33395 *
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US-PATENT-CLASS-29-271	c 15	N70-41371 *	US-PATENT-CLASS-29-572	c 44	N79-18444 *	US-PATENT-CLASS-29-14-86R	c 37	N81-27519 *
US-PATENT-CLASS-29-278R	c 15	N71-29133 *	US-PATENT-CLASS-29-572	c 44	N79-24431 *	US-PATENT-CLASS-29-14-86R	c 18	N83-29303 *
US-PATENT-CLASS-29-400	c 05	N71-12345 *	US-PATENT-CLASS-29-572	c 44	N79-26475 *	US-PATENT-CLASS-29-14-86R	c 54	N81-26718 *
US-PATENT-CLASS-29-402.16	c 37	N86-32736 *	US-PATENT-CLASS-29-572	c 44	N79-31752 *	US-PATENT-CLASS-29-14-86R	c 85	N82-33288 *
US-PATENT-CLASS-29-412	c 15	N72-20444 *	US-PATENT-CLASS-29-572	c 44	N80-14474 *	US-PATENT-CLASS-29-14-86R	c 85	N82-33288 *
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US-PATENT-CLASS-29-420.5	c 26	N74-10521 *	US-PATENT-CLASS-29-572	c 44	N82-29709 *	US-PATENT-CLASS-29-14-86R	c 03	N84-33394 *
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US-PATENT-CLASS-29-420	c 24	N75-13032 *	US-PATENT-CLASS-29-572	c 76	N86-20150 *	US-PATENT-CLASS-29-14-86R	c 05	N72-11085 *
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US-PATENT-CLASS-29-421	c 15	N71-29018 *	US-PATENT-CLASS-29-573	c 14	N73-13417 *	US-PATENT-CLASS-29-14-86R	c 05	N75-25915 *
US-PATENT-CLASS-29-421	c 14	N72-22439 *	US-PATENT-CLASS-29-578B	c 44	N86-32875 *	US-PATENT-CLASS-29-14-86R	c 15	N73-30460 *
US-PATENT-CLASS-29-421	c 37	N76-14461 *	US-PATENT-CLASS-29-578B	c 76	N85-30922 *	US-PATENT-CLASS-29-14-86R	c 05	N75-25915 *
US-PATENT-CLASS-29-423	c 15	N70-36409 *	US-PATENT-CLASS-29-578B	c 35	N82-31659 *	US-PATENT-CLASS-29-14-86R	c 05	N75-25915 *
US-PATENT-CLASS-29-423	c 31	N74-21059 *	US-PATENT-CLASS-29-578B	c 76	N85-30922 *	US-PATENT-CLASS-29-14-86R	c 05	N71-12343 *
US-PATENT-CLASS-29-423	c 52	N84-28389 *	US-PATENT-CLASS-29-578B	c 35	N82-31659 *	US-PATENT-CLASS-29-14-86R	c 05	N72-11085 *
US-PATENT-CLASS-29-426	c 15	N72-20444 *	US-PATENT-CLASS-29-578W	c 76	N85-30922 *	US-PATENT-CLASS-29-14-86R	c 43	N81-26509 *
US-PATENT-CLASS-29-428	c 15	N71-17686 *	US-PATENT-CLASS-29-577	c 44	N79-26475 *	US-PATENT-CLASS-29-14-86R	c 43	N81-26509 *
US-PATENT-CLASS-29-432	c 37	N76-19437 *	US-PATENT-CLASS-29-578	c 26	N72-17820 *	US-PATENT-CLASS-29-14-86R	c 43	N79-26439 *
US-PATENT-CLASS-29-433	c 37	N76-19437 *	US-PATENT-CLASS-29-578	c 33	N78-27326 *	US-PATENT-CLASS-29-14-86R	c 35	N84-33788 *
US-PATENT-CLASS-29-446	c 37	N83-36482 *	US-PATENT-CLASS-29-578	c 44	N79-18444 *	US-PATENT-CLASS-29-14-86R	c 43	N81-26509 *
US-PATENT-CLASS-29-447	c 37	N77-23482 *	US-PATENT-CLASS-29-578	c 44	N79-26475 *	US-PATENT-CLASS-29-14-86R	c 46	N74-23068 *
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US-PATENT-CLASS-29-452	c 15	N73-30457 *	US-PATENT-CLASS-29-578	c 76	N85-30922 *	US-PATENT-CLASS-29-14-86R	c 05	N73-32013 *
US-PATENT-CLASS-29-458	c 26	N83-10170 *	US-PATENT-CLASS-29-580	c 09	N73-27150 *	US-PATENT-CLASS-29-14-86R	c 52	N77-14738 *
US-PATENT-CLASS-29-460	c 37	N74-11301 *	US-PATENT-CLASS-29-580	c 44	N79-26475 *	US-PATENT-CLASS-29-14-86R	c 54	N79-24652 *
US-PATENT-CLASS-29-460	c 37	N75-13261 *	US-PATENT-CLASS-29-580	c 33	N81-26360 *	US-PATENT-CLASS-29-14-86R	c 74	N84-11921 *
US-PATENT-CLASS-29-463	c 07	N78-33101 *	US-PATENT-CLASS-29-588	c 14	N71-27334 *	US-PATENT-CLASS-29-14-86R	c 52	N77-14735 *
US-PATENT-CLASS-29-467	c 39	N76-31562 *	US-PATENT-CLASS-29-588	c 14	N72-31446 *	US-PATENT-CLASS-29-14-86R	c 52	N78-10686 *
US-PATENT-CLASS-29-470.1	c 37	N74-21057 *	US-PATENT-CLASS-29-588	c 44	N74-14784 *	US-PATENT-CLASS-29-14-86R	c 27	N78-17215 *
US-PATENT-CLASS-29-470.1	c 37	N75-13236 *	US-PATENT-CLASS-29-588	c 44	N80-14474 *	US-PATENT-CLASS-29-14-86R	c 52	N79-26772 *
US-PATENT-CLASS-29-472.7	c 37	N75-15992 *	US-PATENT-CLASS-29-589	c 26	N72-17820 *	US-PATENT-CLASS-29-14-86R	c 54	N78-17676 *
US-PATENT-CLASS-29-472.9	c 15	N69-39786 *	US-PATENT-CLASS-29-589	c 09	N72-25261 *	US-PATENT-CLASS-29-14-86R	c 54	N79-24652 *
US-PATENT-CLASS-29-472.9	c 26	N71-16037 *	US-PATENT-CLASS-29-589	c 15	N73-14469 *	US-PATENT-CLASS-29-14-86R	c 05	N73-32013 *
US-PATENT-CLASS-29-472.9	c 15	N72-22492 *	US-PATENT-CLASS-29-589	c 44	N79-31752 *	US-PATENT-CLASS-29-14-86R	c 52	N78-26772 *
US-PATENT-CLASS-29-473.1	c 15	N72-22487 *	US-PATENT-CLASS-29-590	c 09	N72-22199 *	US-PATENT-CLASS-29-14-86R	c 52	N77-14735 *
US-PATENT-CLASS-29-473.1	c 15	N72-22492 *	US-PATENT-CLASS-29-591	c 15	N73-14469 *	US-PATENT-CLASS-29-14-86R	c 52	N78-10686 *
US-PATENT-CLASS-29-473.1	c 37	N75-15992 *	US-PATENT-CLASS-29-591	c 44	N79-18444 *	US-PATENT-CLASS-29-14-86R	c 52	N77-25772 *
US-PATENT-CLASS-29-475	c 37	N75-12326 *	US-PATENT-CLASS-29-592	c 35	N75-13213 *	US-PATENT-CLASS-29-14-86R	c 54	N77-30749 *
US-PATENT-CLASS-29-482	c 05	N72-25121 *	US-PATENT-CLASS-29-597	c 33	N77-26385 *	US-PATENT-CLASS-29-14-86R	c 52	N78-10686 *
US-PATENT-CLASS-29-482	c 37	N74-18128 *	US-PATENT-CLASS-29-599	c 15	N72-25447 *	US-PATENT-CLASS-29-14-86R	c 05	N73-32013 *
US-PATENT-CLASS-29-487	c 15	N73-33383 *	US-PATENT-CLASS-29-599	c 28	N73-26752 *	US-PATENT-CLASS-29-14-86R	c 54	N77-30749 *
US-PATENT-CLASS-29-487	c 37	N74-21055 *	US-PATENT-CLASS-29-599	c 28	N73-32571 *	US-PATENT-CLASS-29-14-86R	c 52	N79-26772 *
US-PATENT-CLASS-29-488	c 15	N70-33311 *	US-PATENT-CLASS-29-603	c 08	N71-27210 *	US-PATENT-CLASS-29-14-86R	c 05	N73-32013 *
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US-PATENT-CLASS-29-492	c 15	N71-20443 *	US-PATENT-CLASS-29-610SG	c 35	N85-21598 *	US-PATENT-CLASS-29-14-86R	c 37	N84-28085 *
US-PATENT-CLASS-29-492	c 09	N72-25261 *	US-PATENT-CLASS-29-610	c 24	N75-30260 *	US-PATENT-CLASS-29-14-86R	c 37	N84-28085 *
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US-PATENT-CLASS-29-494	c 37	N75-13261 *	US-PATENT-CLASS-29-620	c 35	N82-31659 *	US-PATENT-CLASS-29-14-86R	c 37	N84-28085 *
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US-PATENT-CLASS-30-90.6	c 37	N79-10419 *	#	US-PATENT-CLASS-307-252Q	c 33	N74-27682 *	#	US-PATENT-CLASS-307-520	c 33	N85-29145 *	#
US-PATENT-CLASS-301-5P	c 37	N74-18125 *	#	US-PATENT-CLASS-307-252R	c 09	N72-23171 *	#	US-PATENT-CLASS-307-521	c 33	N85-29145 *	#
US-PATENT-CLASS-301-82	c 33	N79-10339 *	#	US-PATENT-CLASS-307-252UA	c 33	N81-27395 *	#	US-PATENT-CLASS-307-529	c 33	N85-29145 *	#
US-PATENT-CLASS-302-66	c 25	N79-11152 *	#	US-PATENT-CLASS-307-252	c 10	N69-39888 *	#	US-PATENT-CLASS-307-53	c 10	N71-26626 *	#
US-PATENT-CLASS-303-92	c 44	N79-14527 *	#	US-PATENT-CLASS-307-252	c 09	N71-12514 *	#	US-PATENT-CLASS-307-53	c 33	N78-17296 *	#
US-PATENT-CLASS-305-35EB	c 11	N73-26238 *	#	US-PATENT-CLASS-307-253	c 10	N71-27126 *	#	US-PATENT-CLASS-307-566	c 33	N86-20672 *	#
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US-PATENT-CLASS-307-103	c 09	N72-25262 *	#	US-PATENT-CLASS-307-254	c 09	N72-22200 *	#	US-PATENT-CLASS-307-572	c 33	N86-20672 *	#
US-PATENT-CLASS-307-104	c 09	N71-24892 *	#	US-PATENT-CLASS-307-257	c 09	N72-21247 *	#	US-PATENT-CLASS-307-63	c 44	N80-14472 *	#
US-PATENT-CLASS-307-106	c 09	N69-21468 *	#	US-PATENT-CLASS-307-259	c 09	N72-21247 *	#	US-PATENT-CLASS-307-64	c 33	N77-30365 *	#
US-PATENT-CLASS-307-118	c 09	N72-27227 *	#	US-PATENT-CLASS-307-259	c 09	N72-23171 *	#	US-PATENT-CLASS-307-64	c 44	N85-21769 *	#
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US-PATENT-CLASS-307-127	c 33	N74-14956 *	#	US-PATENT-CLASS-307-260	c 05	N71-23317 *	#	US-PATENT-CLASS-307-69	c 33	N78-17296 *	#
US-PATENT-CLASS-307-136	c 09	N69-27500 *	#	US-PATENT-CLASS-307-261	c 33	N75-19515 *	#	US-PATENT-CLASS-307-81	c 09	N72-17157 *	#
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US-PATENT-CLASS-307-149	c 09	N71-13486 *	#	US-PATENT-CLASS-307-261	c 09	N72-25251 *	#	US-PATENT-CLASS-307-82	c 33	N85-29147 *	#
US-PATENT-CLASS-307-149	c 54	N75-12616 *	#	US-PATENT-CLASS-307-262	c 10	N72-16172 *	#	US-PATENT-CLASS-307-83	c 09	N72-25262 *	#
US-PATENT-CLASS-307-151	c 32	N78-24391 *	#	US-PATENT-CLASS-307-262	c 09	N72-22197 *	#	US-PATENT-CLASS-307-87	c 33	N84-33660 *	#
US-PATENT-CLASS-307-157	c 16	N73-32391 *	#	US-PATENT-CLASS-307-262	c 09	N72-33204 *	#	US-PATENT-CLASS-307-88.3	c 09	N72-25258 *	#
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US-PATENT-CLASS-307-208	c 33	N75-14957 *	#	US-PATENT-CLASS-307-265	c 08	N71-29138 *	#	US-PATENT-CLASS-307-88.5	c 10	N71-28739 *	#
US-PATENT-CLASS-307-211	c 35	N75-30504 *	#	US-PATENT-CLASS-307-265	c 09	N71-29139 *	#	US-PATENT-CLASS-307-88MP	c 09	N72-22197 *	#
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US-PATENT-CLASS-307-215	c 10	N72-22236 *	#	US-PATENT-CLASS-307-267	c 33	N74-32711 *	#	US-PATENT-CLASS-307-88	c 09	N71-24803 *	#
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US-PATENT-CLASS-307-219	c 35	N75-30504 *	#	US-PATENT-CLASS-307-270	c 33	N78-17294 *	#	US-PATENT-CLASS-308-DIG.1	c 15	N72-17451 *	#
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US-PATENT-CLASS-307-220	c 10	N73-26229 *	#	US-PATENT-CLASS-307-271	c 10	N73-32145 *	#	US-PATENT-CLASS-308-DIG.8	c 24	N79-17916 *	#
US-PATENT-CLASS-307-220	c 10	N73-20254 *	#	US-PATENT-CLASS-307-271	c 33	N85-29145 *	#	US-PATENT-CLASS-308-DIG.9	c 24	N79-17916 *	#
US-PATENT-CLASS-307-221R	c 33	N76-14373 *	#	US-PATENT-CLASS-307-273	c 10	N71-18723 *	#	US-PATENT-CLASS-308-10	c 15	N71-22997 *	#
US-PATENT-CLASS-307-221R	c 10	N73-20254 *	#	US-PATENT-CLASS-307-273	c 09	N71-27016 *	#	US-PATENT-CLASS-308-10	c 15	N72-33476 *	#
US-PATENT-CLASS-307-222	c 09	N69-27463 *	#	US-PATENT-CLASS-307-273	c 09	N71-28468 *	#	US-PATENT-CLASS-308-10	c 35	N74-18323 *	#
US-PATENT-CLASS-307-222	c 08	N71-29034 *	#	US-PATENT-CLASS-307-273	c 10	N71-28860 *	#	US-PATENT-CLASS-308-10	c 37	N75-18574 *	#
US-PATENT-CLASS-307-223B	c 09	N72-22201 *	#	US-PATENT-CLASS-307-273	c 09	N71-29139 *	#	US-PATENT-CLASS-308-10	c 37	N76-18459 *	#
US-PATENT-CLASS-307-223	c 09	N72-17157 *	#	US-PATENT-CLASS-307-273	c 10	N72-20221 *	#	US-PATENT-CLASS-308-10	c 37	N77-17464 *	#
US-PATENT-CLASS-307-223	c 33	N74-10223 *	#	US-PATENT-CLASS-307-280	c 33	N77-21314 *	#	US-PATENT-CLASS-308-10	c 44	N78-24608 *	#
US-PATENT-CLASS-307-225R	c 33	N75-31330 *	#	US-PATENT-CLASS-307-284	c 09	N72-22201 *	#	US-PATENT-CLASS-308-10	c 37	N78-27424 *	#
US-PATENT-CLASS-307-225R	c 33	N77-24375 *	#	US-PATENT-CLASS-307-288	c 09	N71-23015 *	#	US-PATENT-CLASS-308-10	c 35	N79-26372 *	#
US-PATENT-CLASS-307-225R	c 60	N81-15706 *	#	US-PATENT-CLASS-307-288	c 09	N71-28468 *	#	US-PATENT-CLASS-308-10	c 71	N81-15767 *	#
US-PATENT-CLASS-307-227	c 09	N72-17157 *	#	US-PATENT-CLASS-307-288	c 10	N72-20221 *	#	US-PATENT-CLASS-308-10	c 44	N83-28574 *	#
US-PATENT-CLASS-307-227	c 33	N75-19522 *	#	US-PATENT-CLASS-307-288	c 09	N72-22202 *	#	US-PATENT-CLASS-308-10	c 37	N83-32067 *	#
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US-PATENT-CLASS-307-229	c 09	N72-23173 *	#	US-PATENT-CLASS-307-288	c 03	N73-31988 *	#	US-PATENT-CLASS-308-10	c 71	N83-36846 *	#
US-PATENT-CLASS-307-229	c 33	N75-18479 *	#	US-PATENT-CLASS-307-288	c 33	N74-22814 *	#	US-PATENT-CLASS-308-10	c 37	N85-20337 *	#
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US-PATENT-CLASS-307-229	c 33	N78-32339 *	#	US-PATENT-CLASS-307-291	c 09	N71-29139 *	#	US-PATENT-CLASS-308-121	c 37	N75-30562 *	#
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US-PATENT-CLASS-307-230	c 09	N72-21245 *	#	US-PATENT-CLASS-307-295	c 10	N72-20223 *	#	US-PATENT-CLASS-308-122	c 37	N76-15461 *	#
US-PATENT-CLASS-307-230	c 09	N73-20232 *	#	US-PATENT-CLASS-307-295	c 09	N72-21245 *	#	US-PATENT-CLASS-308-160	c 37	N76-15461 *	#
US-PATENT-CLASS-307-230	c 33	N74-32712 *	#	US-PATENT-CLASS-307-295	c 09	N72-33204 *	#	US-PATENT-CLASS-308-160	c 37	N76-29588 *	#
US-PATENT-CLASS-307-230	c 33	N77-17354 *	#	US-PATENT-CLASS-307-295	c 33	N74-34638 *	#	US-PATENT-CLASS-308-160	c 37	N79-10418 *	#
US-PATENT-CLASS-307-230	c 33	N78-32339 *	#	US-PATENT-CLASS-307-295	c 33	N77-13315 *	#	US-PATENT-CLASS-308-163	c 37	N76-29588 *	#
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US-PATENT-CLASS-307-232	c 33	N77-21314 *	#	US-PATENT-CLASS-307-296	c 07	N71-28430 *	#	US-PATENT-CLASS-308-168	c 24	N79-17916 *	#
US-PATENT-CLASS-307-232	c 33	N79-11313 *	#	US-PATENT-CLASS-307-297	c 33	N78-17294 *	#	US-PATENT-CLASS-308-170	c 15	N71-28465 *	#
US-PATENT-CLASS-307-233R	c 32	N79-10262 *	#	US-PATENT-CLASS-307-299	c 08	N72-21198 *	#	US-PATENT-CLASS-308-171	c 37	N76-29588 *	#
US-PATENT-CLASS-307-233R	c 33	N81-17348 *	#	US-PATENT-CLASS-307-299	c 26	N72-21701 *	#	US-PATENT-CLASS-308-172	c 24	N79-17916 *	#
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US-PATENT-CLASS-307-233	c 33	N77-13315 *	#	US-PATENT-CLASS-307-303	c 08	N72-21198 *	#	US-PATENT-CLASS-308-176	c 15	N71-22982 *	#
US-PATENT-CLASS-307-234	c 10	N71-23315 *	#	US-PATENT-CLASS-307-304	c 09	N72-22201 *	#	US-PATENT-CLASS-308-177	c 15	N71-29136 *	#
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US-PATENT-CLASS-307-235R	c 10	N71-19471 *	#	US-PATENT-CLASS-307-306	c 33	N78-13320 *	#	US-PATENT-CLASS-308-191	c 37	N74-21064 *	#
US-PATENT-CLASS-307-235	c 09	N71-23545 *	#	US-PATENT-CLASS-307-306	c 33	N81-17348 *	#	US-PATENT-CLASS-308-191	c 37	N75-31446 *	#
US-PATENT-CLASS-307-235	c 10	N71-24862 *	#	US-PATENT-CLASS-307-308	c 14	N73-28488 *	#	US-PATENT-CLASS-308-193	c 15	N73-30458 *	#
US-PATENT-CLASS-307-237	c 09	N72-22200 *	#	US-PATENT-CLASS-307-309	c 35	N75-13213 *	#	US-PATENT-CLASS-308-194	c 37	N79-11404 *	#
US-PATENT-CLASS-307-237	c 32	N74-19788 *	#	US-PATENT-CLASS-307-310	c 09	N73-14214 *	#	US-PATENT-CLASS-308-195	c 15	N72-22490 *	#
US-PATENT-CLASS-307-238	c 33	N75-31331 *	#	US-PATENT-CLASS-307-311	c 14	N72-18411 *	#	US-PATENT-CLASS-308-195	c 37	N75-31446 *	#
US-PATENT-CLASS-307-238	c 33	N77-21314 *	#	US-PATENT-CLASS-307-311	c 08	N72-21198 *	#	US-PATENT-CLASS-308-195	c 37	N77-32500 *	#
US-PATENT-CLASS-307-241	c 09	N72-22201 *	#	US-PATENT-CLASS-307-311	c 09	N73-14214 *	#	US-PATENT-CLASS-308-195	c 37	N77-32501 *	#
US-PATENT-CLASS-307-242	c 10	N73-13235 *	#	US-PATENT-CLASS-307-311	c 10	N72-20221 *	#	US-PATENT-CLASS-308-195	c 31	N71-26537 *	#
US-PATENT-CLASS-307-243	c 09	N71-12516 *	#	US-PATENT-CLASS-307-317	c 09	N72-22200 *	#	US-PATENT-CLASS-308-2A	c 15	N72-26371 *	#
US-PATENT-CLASS-307-243	c 08	N72-22162 *	#	US-PATENT-CLASS-307-317	c 09	N72-22201 *	#	US-PATENT-CLASS-308-2A	c 15	N73-12488 *	#
US-PATENT-CLASS-307-243	c 33	N74-22814 *	#	US-PATENT-CLASS-307-321	c 33	N75-19520 *	#	US-PATENT-CLASS-308-2A	c 37	N84-12492 *	#
US-PATENT-CLASS-307-246	c 09	N71-27016 *	#	US-PATENT-CLASS-307-321	c 33	N75-25041 *	#	US-PATENT-CLASS-308-201	c 37	N75-31446 *	#
US-PATENT-CLASS-307-247	c 09	N									

US-PATENT-CLASS-308-72	c 37	N79-11404 *	#	US-PATENT-CLASS-310-77	c 37	N85-30333 *	#	US-PATENT-CLASS-313-362	c 72	N80-27163 *	#
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US-PATENT-CLASS-308-73	c 37	N75-30562 *	#	US-PATENT-CLASS-310-8.5	c 14	N71-22993 *	#	US-PATENT-CLASS-313-363	c 72	N80-27163 *	#
US-PATENT-CLASS-308-73	c 37	N76-15461 *	#	US-PATENT-CLASS-310-800	c 78	N83-34796 *	#	US-PATENT-CLASS-313-442	c 74	N78-18905 *	#
US-PATENT-CLASS-308-73	c 37	N77-28486 *	#	US-PATENT-CLASS-310-80	c 15	N72-25466 *	#	US-PATENT-CLASS-313-44	c 15	N69-24319 *	#
US-PATENT-CLASS-308-76	c 24	N79-17916 *	#	US-PATENT-CLASS-310-82	c 33	N79-20314 *	#	US-PATENT-CLASS-313-80	c 33	N77-22366 *	#
US-PATENT-CLASS-308-87R	c 24	N79-17916 *	#	US-PATENT-CLASS-310-83	c 15	N72-25466 *	#	US-PATENT-CLASS-313-81S	c 73	N74-26767 *	#
US-PATENT-CLASS-308-9	c 15	N70-34664 *	#	US-PATENT-CLASS-310-9.1	c 15	N71-21311 *	#	US-PATENT-CLASS-313-81S	c 37	N78-13436 *	#
US-PATENT-CLASS-308-9	c 15	N70-38620 *	#	US-PATENT-CLASS-310-93	c 15	N71-17662 *	#	US-PATENT-CLASS-313-83	c 28	N70-41576 *	#
US-PATENT-CLASS-308-9	c 15	N70-39896 *	#	US-PATENT-CLASS-310-93	c 37	N85-30333 *	#	US-PATENT-CLASS-313-83	c 09	N71-10618 *	#
US-PATENT-CLASS-308-9	c 15	N71-20739 *	#	US-PATENT-CLASS-311-37	c 35	N75-29380 *	#	US-PATENT-CLASS-313-83	c 28	N71-26781 *	#
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US-PATENT-CLASS-31-35	c 31	N85-21404 *	#	US-PATENT-CLASS-312-319	c 37	N79-33467 *	#	US-PATENT-CLASS-313-93	c 35	N82-24471 *	#
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US-PATENT-CLASS-310-10	c 09	N71-23443 *	#	US-PATENT-CLASS-313-106	c 24	N83-10117 *	#	US-PATENT-CLASS-314-129	c 15	N69-24266 *	#
US-PATENT-CLASS-310-10	c 09	N71-24904 *	#	US-PATENT-CLASS-313-106	c 70	N84-28565 *	#	US-PATENT-CLASS-315-DIG.2	c 16	N73-32391 *	#
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US-PATENT-CLASS-310-12	c 37	N83-32067 *	#	US-PATENT-CLASS-313-161	c 25	N73-25760 *	#	US-PATENT-CLASS-315-111.6	c 20	N77-20162 *	#
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US-PATENT-CLASS-310-154	c 35	N84-28017 *	#	US-PATENT-CLASS-313-175	c 33	N77-21316 *	#	US-PATENT-CLASS-315-111	c 25	N70-41628 *	#
US-PATENT-CLASS-310-15	c 09	N72-25255 *	#	US-PATENT-CLASS-313-175	c 31	N78-17238 *	#	US-PATENT-CLASS-315-111	c 25	N71-15562 *	#
US-PATENT-CLASS-310-15	c 44	N83-28574 *	#	US-PATENT-CLASS-313-176	c 31	N78-17238 *	#	US-PATENT-CLASS-315-111	c 24	N71-16213 *	#
US-PATENT-CLASS-310-168	c 09	N71-25999 *	#	US-PATENT-CLASS-313-180	c 33	N77-21316 *	#	US-PATENT-CLASS-315-111	c 25	N71-21693 *	#
US-PATENT-CLASS-310-168	c 33	N77-26387 *	#	US-PATENT-CLASS-313-180	c 31	N78-17238 *	#	US-PATENT-CLASS-315-111	c 28	N71-26781 *	#
US-PATENT-CLASS-310-171	c 35	N84-28017 *	#	US-PATENT-CLASS-313-182	c 33	N77-22386 *	#	US-PATENT-CLASS-315-111	c 25	N71-26184 *	#
US-PATENT-CLASS-310-176	c 44	N78-24608 *	#	US-PATENT-CLASS-313-184	c 33	N77-21315 *	#	US-PATENT-CLASS-315-111	c 09	N71-33519 *	#
US-PATENT-CLASS-310-20	c 71	N79-20827 *	#	US-PATENT-CLASS-313-184	c 33	N77-21316 *	#	US-PATENT-CLASS-315-111	c 25	N72-24753 *	#
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US-PATENT-CLASS-310-254	c 09	N71-25999 *	#	US-PATENT-CLASS-313-209	c 33	N74-12913 *	#	US-PATENT-CLASS-315-111	c 75	N75-13625 *	#
US-PATENT-CLASS-310-269	c 44	N78-24608 *	#	US-PATENT-CLASS-313-212	c 25	N72-24753 *	#	US-PATENT-CLASS-315-111	c 33	N75-29318 *	#
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US-PATENT-CLASS-310-2	c 03	N72-23048 *	#	US-PATENT-CLASS-313-217	c 33	N74-12913 *	#	US-PATENT-CLASS-315-11	c 33	N74-21850 *	#
US-PATENT-CLASS-310-300	c 71	N84-23233 *	#	US-PATENT-CLASS-313-218	c 28	N73-27699 *	#	US-PATENT-CLASS-315-12	c 33	N74-21850 *	#
US-PATENT-CLASS-310-306	c 33	N80-18287 *	#	US-PATENT-CLASS-313-224	c 25	N72-24753 *	#	US-PATENT-CLASS-315-135	c 09	N72-25250 *	#
US-PATENT-CLASS-310-306	c 44	N83-32175 *	#	US-PATENT-CLASS-313-224	c 33	N74-12913 *	#	US-PATENT-CLASS-315-145	c 33	N80-14330 *	#
US-PATENT-CLASS-310-306	c 34	N85-29179 *	#	US-PATENT-CLASS-313-224	c 33	N77-21315 *	#	US-PATENT-CLASS-315-151	c 14	N72-27411 *	#
US-PATENT-CLASS-310-30	c 44	N80-29834 *	#	US-PATENT-CLASS-313-224	c 31	N78-17238 *	#	US-PATENT-CLASS-315-153	c 14	N73-16483 *	#
US-PATENT-CLASS-310-311	c 35	N80-20559 *	#	US-PATENT-CLASS-313-22	c 09	N71-26787 *	#	US-PATENT-CLASS-315-153	c 74	N79-12890 *	#
US-PATENT-CLASS-310-317	c 35	N84-22932 *	#	US-PATENT-CLASS-313-22	c 31	N78-17237 *	#	US-PATENT-CLASS-315-156	c 14	N72-27411 *	#
US-PATENT-CLASS-310-319	c 33	N80-23559 *	#	US-PATENT-CLASS-313-22	c 31	N78-25256 *	#	US-PATENT-CLASS-315-158	c 14	N72-27411 *	#
US-PATENT-CLASS-310-322	c 71	N79-20827 *	#	US-PATENT-CLASS-313-22	c 34	N79-20336 *	#	US-PATENT-CLASS-315-160	c 09	N71-12540 *	#
US-PATENT-CLASS-310-324	c 33	N86-20671 *	#	US-PATENT-CLASS-313-230	c 28	N71-28850 *	#	US-PATENT-CLASS-315-169R	c 23	N73-13660 *	#
US-PATENT-CLASS-310-326	c 38	N79-14398 *	#	US-PATENT-CLASS-313-230	c 28	N73-27699 *	#	US-PATENT-CLASS-315-169R	c 36	N75-19652 *	#
US-PATENT-CLASS-310-327	c 35	N80-20559 *	#	US-PATENT-CLASS-313-230	c 20	N77-20162 *	#	US-PATENT-CLASS-315-169TV	c 23	N73-13660 *	#
US-PATENT-CLASS-310-332	c 76	N83-34796 *	#	US-PATENT-CLASS-313-231.3	c 20	N77-20162 *	#	US-PATENT-CLASS-315-176	c 33	N77-28385 *	#
US-PATENT-CLASS-310-334	c 71	N79-20827 *	#	US-PATENT-CLASS-313-231.3	c 75	N78-27913 *	#	US-PATENT-CLASS-315-18	c 32	N74-20813 *	#
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US-PATENT-CLASS-310-334	c 35	N84-22932 *	#	US-PATENT-CLASS-313-231.4	c 72	N80-33186 *	#	US-PATENT-CLASS-315-208	c 33	N83-34189 *	#
US-PATENT-CLASS-310-336	c 38	N79-14398 *	#	US-PATENT-CLASS-313-231	c 06	N69-39898 *	#	US-PATENT-CLASS-315-209CD	c 37	N79-11405 *	#
US-PATENT-CLASS-310-360	c 35	N80-20559 *	#	US-PATENT-CLASS-313-231	c 09	N71-23190 *	#	US-PATENT-CLASS-315-209SC	c 37	N79-11405 *	#
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US-PATENT-CLASS-310-4A	c 37	N77-19458 *	#	US-PATENT-CLASS-313-231	c 25	N72-24753 *	#	US-PATENT-CLASS-315-22R	c 10	N73-31273 *	#
US-PATENT-CLASS-310-4R	c 33	N74-27683 *	#	US-PATENT-CLASS-313-231	c 25	N72-32688 *	#	US-PATENT-CLASS-315-224	c 33	N83-34189 *	#
US-PATENT-CLASS-310-4R	c 73	N77-18891 *	#	US-PATENT-CLASS-313-231	c 28	N73-24783 *	#	US-PATENT-CLASS-315-225	c 33	N83-34189 *	#
US-PATENT-CLASS-310-40	c 20	N75-24837 *	#	US-PATENT-CLASS-313-231	c 25	N73-25760 *	#	US-PATENT-CLASS-315-228	c 33	N74-20859 *	#
US-PATENT-CLASS-310-42	c 14	N72-22439 *	#	US-PATENT-CLASS-313-236	c 09	N71-26182 *	#	US-PATENT-CLASS-315-22	c 10	N72-20225 *	#
US-PATENT-CLASS-310-46	c 33	N79-20314 *	#	US-PATENT-CLASS-313-237	c 09	N71-26182 *	#	US-PATENT-CLASS-315-22	c 32	N74-20813 *	#
US-PATENT-CLASS-310-4	c 09	N69-21313 *	#	US-PATENT-CLASS-313-240	c 20	N77-10148 *	#	US-PATENT-CLASS-315-22	c 33	N78-17293 *	#
US-PATENT-CLASS-310-4	c 03	N69-39898 *	#	US-PATENT-CLASS-313-250	c 31	N76-31365 *	#	US-PATENT-CLASS-315-237	c 33	N83-34189 *	#
US-PATENT-CLASS-310-4	c 09	N69-39929 *	#	US-PATENT-CLASS-313-271	c 25	N71-20747 *	#	US-PATENT-CLASS-315-241R	c 37	N79-11405 *	#
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US-PATENT-CLASS-310-4	c 03	N71-11055 *	#	US-PATENT-CLASS-313-309	c 10	N72-27246 *	#	US-PATENT-CLASS-315-241	c 09	N71-13518 *	#
US-PATENT-CLASS-310-4	c 22	N71-23599 *	#	US-PATENT-CLASS-313-309	c 31	N76-31365 *	#	US-PATENT-CLASS-315-248	c 09	N73-30181 *	#
US-PATENT-CLASS-310-4	c 09	N71-24807 *	#	US-PATENT-CLASS-313-311	c 73	N77-18891 *	#	US-PATENT-CLASS-315-24	c 08	N71-20571 *	#
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US-PATENT-CLASS-315-310	c 14	N72-27411 *	#	US-PATENT-CLASS-317-235WW	c 09	N73-32112 *	#	US-PATENT-CLASS-318-577	c 37	N86-21850 *	#
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US-PATENT-CLASS-315-324	c 09	N73-30181 *	#	US-PATENT-CLASS-317-235	c 09	N72-33205 *	#	US-PATENT-CLASS-318-580	c 04	N82-23231 *	#
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US-PATENT-CLASS-315-334	c 33	N80-14330 *	#	US-PATENT-CLASS-317-245	c 33	N79-21265 *	#	US-PATENT-CLASS-318-584	c 08	N86-27288 *	#
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US-PATENT-CLASS-315-356	c 16	N73-32391 *	#	US-PATENT-CLASS-317-246	c 35	N76-22509 *	#	US-PATENT-CLASS-318-594	c 35	N79-14348 *	#
US-PATENT-CLASS-315-358	c 25	N72-24753 *	#	US-PATENT-CLASS-317-247	c 14	N72-24477 *	#	US-PATENT-CLASS-318-599	c 10	N71-24861 *	#
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US-PATENT-CLASS-315-369	c 33	N75-26244 *	#	US-PATENT-CLASS-317-258	c 33	N76-15373 *	#	US-PATENT-CLASS-318-603	c 33	N74-29556 *	#
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US-PATENT-CLASS-315-387	c 33	N75-26244 *	#	US-PATENT-CLASS-317-261	c 33	N76-15373 *	#	US-PATENT-CLASS-318-608	c 33	N75-13139 *	#
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US-PATENT-CLASS-315-39.3	c 33	N86-21742 *	#	US-PATENT-CLASS-317-31	c 33	N74-19229 *	#	US-PATENT-CLASS-318-620	c 33	N82-18493 *	#
US-PATENT-CLASS-315-3	c 33	N83-31952 *	#	US-PATENT-CLASS-317-31	c 33	N77-14333 *	#	US-PATENT-CLASS-318-621	c 33	N82-18493 *	#
US-PATENT-CLASS-315-4	c 33	N83-31952 *	#	US-PATENT-CLASS-317-33SC	c 33	N74-14956 *	#	US-PATENT-CLASS-318-622	c 33	N82-18493 *	#
US-PATENT-CLASS-315-5.35	c 33	N74-10195 *	#	US-PATENT-CLASS-317-33	c 10	N71-26531 *	#	US-PATENT-CLASS-318-628	c 08	N74-10942 *	#
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US-PATENT-CLASS-315-5.38	c 09	N73-13208 *	#	US-PATENT-CLASS-317-33	c 10	N71-27366 *	#	US-PATENT-CLASS-318-636	c 31	N86-29055 *	#
US-PATENT-CLASS-315-5.38	c 33	N74-10195 *	#	US-PATENT-CLASS-317-33	c 09	N71-29008 *	#	US-PATENT-CLASS-318-640	c 33	N75-13139 *	#
US-PATENT-CLASS-315-5.38	c 33	N82-24415 *	#	US-PATENT-CLASS-317-43	c 33	N74-14956 *	#	US-PATENT-CLASS-318-640	c 54	N75-27758 *	#
US-PATENT-CLASS-315-5.38	c 24	N83-10117 *	#	US-PATENT-CLASS-317-46	c 33	N74-14956 *	#	US-PATENT-CLASS-318-640	c 35	N79-14348 *	#
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US-PATENT-CLASS-315-5.38	c 31	N86-32587 *	#	US-PATENT-CLASS-317-60	c 09	N71-29008 *	#	US-PATENT-CLASS-318-653	c 10	N71-27136 *	#
US-PATENT-CLASS-315-5	c 33	N83-31952 *	#	US-PATENT-CLASS-317-9	c 09	N71-22796 *	#	US-PATENT-CLASS-318-661	c 31	N86-29055 *	#
US-PATENT-CLASS-317-DIG.3	c 10	N71-26334 *	#	US-PATENT-CLASS-317-9	c 09	N71-27001 *	#	US-PATENT-CLASS-318-663	c 37	N81-33483 *	#
US-PATENT-CLASS-317-DIG.6	c 10	N73-26228 *	#	US-PATENT-CLASS-318-116	c 71	N79-20827 *	#	US-PATENT-CLASS-318-663	c 37	N86-27629 *	#
US-PATENT-CLASS-317-100	c 10	N71-28783 *	#	US-PATENT-CLASS-318-116	c 71	N84-23233 *	#	US-PATENT-CLASS-318-664	c 33	N74-29556 *	#
US-PATENT-CLASS-317-100	c 10	N73-25243 *	#	US-PATENT-CLASS-318-135	c 33	N82-24421 *	#	US-PATENT-CLASS-318-675	c 33	N75-13139 *	#
US-PATENT-CLASS-317-101A	c 09	N72-33205 *	#	US-PATENT-CLASS-318-137	c 33	N75-19524 *	#	US-PATENT-CLASS-318-675	c 37	N77-27400 *	#
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US-PATENT-CLASS-317-101DH	c 15	N72-22486 *	#	US-PATENT-CLASS-318-138	c 14	N71-17585 *	#	US-PATENT-CLASS-318-729	c 33	N83-34190 *	#
US-PATENT-CLASS-317-101DH	c 10	N73-25243 *	#	US-PATENT-CLASS-318-138	c 10	N71-18772 *	#	US-PATENT-CLASS-318-729	c 33	N84-14424 *	#
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US-PATENT-CLASS-317-122	c 15	N71-18701 *	#	US-PATENT-CLASS-318-15	c 37	N80-32716 *	#	US-PATENT-CLASS-318-729	c 33	N84-33661 *	#
US-PATENT-CLASS-317-123	c 09	N71-24892 *	#	US-PATENT-CLASS-318-167	c 33	N75-19524 *	#	US-PATENT-CLASS-318-729	c 44	N85-21769 *	#
US-PATENT-CLASS-317-140	c 09	N70-34502 *	#	US-PATENT-CLASS-318-176	c 33	N75-19524 *	#	US-PATENT-CLASS-318-729	c 33	N85-22877 *	#
US-PATENT-CLASS-317-148.5	c 10	N71-23271 *	#	US-PATENT-CLASS-318-183	c 33	N75-19524 *	#	US-PATENT-CLASS-318-798	c 33	N83-34190 *	#
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US-PATENT-CLASS-317-153	c 10	N71-26334 *	#	US-PATENT-CLASS-318-200	c 33	N78-10376 *	#	US-PATENT-CLASS-318-798	c 33	N84-14424 *	#
US-PATENT-CLASS-317-155.5	c 09	N71-29008 *	#	US-PATENT-CLASS-318-227	c 07	N71-33613 *	#	US-PATENT-CLASS-318-798	c 33	N84-22886 *	#
US-PATENT-CLASS-317-157.5	c 15	N69-21472 *	#	US-PATENT-CLASS-318-227	c 33	N75-15874 *	#	US-PATENT-CLASS-318-799	c 33	N81-27395 *	#
US-PATENT-CLASS-317-158	c 15	N73-28516 *	#	US-PATENT-CLASS-318-227	c 33	N77-26386 *	#	US-PATENT-CLASS-318-799	c 33	N84-16455 *	#
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US-PATENT-CLASS-317-16	c 09	N69-39897 *	#	US-PATENT-CLASS-318-230	c 10	N71-33613 *	#	US-PATENT-CLASS-318-803	c 33	N83-10345 *	#
US-PATENT-CLASS-317-16	c 33	N74-17929 *	#	US-PATENT-CLASS-318-230	c 07	N73-32145 *	#	US-PATENT-CLASS-318-803	c 33	N83-31953 *	#
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US-PATENT-CLASS-317-234A	c 15	N73-14469 *	#	US-PATENT-CLASS-318-254	c 09	N73-32107 *	#	US-PATENT-CLASS-318-809	c 33	N83-31953 *	#
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US-PATENT-CLASS-317-234M	c 09	N73-27150 *	#	US-PATENT-CLASS-318-308	c 11	N72-20244 *	#	US-PATENT-CLASS-32-28	c 05	N73-27062 *	#
US-PATENT-CLASS-317-234M	c 33	N74-12951 *	#	US-PATENT-CLASS-318-314	c 10	N71-20448 *	#	US-PATENT-CLASS-32-58	c 05	N73-27062 *	#
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US-PATENT-CLASS-317-234N	c 33	N74-12951 *	#	US-PATENT-CLASS-318-317	c 09	N71-28886 *	#	US-PATENT-CLASS-320-13	c 44	N78-25531 *	#
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US-PATENT-CLASS-317-234V	c 09	N73-15235 *	#	US-PATENT-CLASS-318-327	c 11	N72-20244 *	#	US-PATENT-CLASS-320-18	c 44	N78-14625 *	#
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US-PATENT-CLASS-317-235AG	c 09	N73-15235 *	#	US-PATENT-CLASS-318-341	c 09	N75-24758 *	#	US-PATENT-CLASS-320-2	c 44	N77-14581 *	#
US-PATENT-CLASS-317-235AJ	c 26	N72-25679 *	#	US-PATENT-CLASS-318-345	c 09	N71-28886 *	#	US-PATENT-CLASS-320-32	c 44	N78-25531 *	#
US-PATENT											



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US-PATENT-CLASS-321-11	c 09	N72-25252 *	#	US-PATENT-CLASS-323-56	c 10	N71-22961 *	#	US-PATENT-CLASS-324-404	c 44	N80-18551 *	#
US-PATENT-CLASS-321-11	c 10	N73-26228 *	#	US-PATENT-CLASS-323-56	c 09	N71-24893 *	#	US-PATENT-CLASS-324-40	c 38	N74-15395 *	#
US-PATENT-CLASS-321-12	c 10	N71-27366 *	#	US-PATENT-CLASS-323-56	c 09	N72-22196 *	#	US-PATENT-CLASS-324-41	c 10	N72-28240 *	#
US-PATENT-CLASS-321-13	c 33	N77-14333 *	#	US-PATENT-CLASS-323-60	c 09	N71-27053 *	#	US-PATENT-CLASS-324-427	c 35	N85-21586 *	#
US-PATENT-CLASS-321-14	c 09	N72-22196 *	#	US-PATENT-CLASS-323-82	c 09	N72-25262 *	#	US-PATENT-CLASS-324-43R	c 35	N76-16390 *	#
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US-PATENT-CLASS-321-18	c 09	N72-25251 *	#	US-PATENT-CLASS-323-93	c 33	N77-31404 *	#	US-PATENT-CLASS-324-43	c 14	N71-26135 *	#
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US-PATENT-CLASS-321-19	c 09	N72-25252 *	#	US-PATENT-CLASS-324-DIG.1	c 33	N75-25041 *	#	US-PATENT-CLASS-324-51	c 33	N80-26599 *	#
US-PATENT-CLASS-321-19	c 33	N77-10428 *	#	US-PATENT-CLASS-324-0.5	c 14	N71-26137 *	#	US-PATENT-CLASS-324-51	c 33	N81-26359 *	#
US-PATENT-CLASS-321-25	c 09	N72-22196 *	#	US-PATENT-CLASS-324-0.5	c 36	N79-14362 *	#	US-PATENT-CLASS-324-52	c 14	N82-24420 *	#
US-PATENT-CLASS-321-2	c 03	N69-21330 *	#	US-PATENT-CLASS-324-102	c 09	N72-11225 *	#	US-PATENT-CLASS-324-52	c 14	N73-28486 *	#
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US-PATENT-CLASS-321-2	c 09	N72-22203 *	#	US-PATENT-CLASS-324-106	c 08	N71-29138 *	#	US-PATENT-CLASS-324-57R	c 15	N72-21464 *	#
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US-PATENT-CLASS-321-2	c 09	N72-25254 *	#	US-PATENT-CLASS-324-115	c 14	N71-26244 *	#	US-PATENT-CLASS-324-57	c 10	N71-16057 *	#
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US-PATENT-CLASS-321-47	c 09	N71-33109 *	#	US-PATENT-CLASS-324-132	c 09	N71-13530 *	#	US-PATENT-CLASS-324-60C	c 35	N75-12270 *	#
US-PATENT-CLASS-321-47	c 09	N72-25253 *	#	US-PATENT-CLASS-324-132	c 10	N72-20222 *	#	US-PATENT-CLASS-324-60C	c 76	N76-20994 *	#
US-PATENT-CLASS-321-48	c 12	N71-20896 *	#	US-PATENT-CLASS-324-133	c 10	N71-27338 *	#	US-PATENT-CLASS-324-60	c 33	N77-31404 *	#
US-PATENT-CLASS-321-5	c 08	N71-18752 *	#	US-PATENT-CLASS-324-133	c 33	N79-10337 *	#	US-PATENT-CLASS-324-61R	c 14	N72-24477 *	#
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US-PATENT-CLASS-321-69	c 10	N71-26414 *	#	US-PATENT-CLASS-324-133	c 15	N72-25457 *	#	US-PATENT-CLASS-324-61	c 18	N71-10797 *	#
US-PATENT-CLASS-321-8R	c 35	N74-18090 *	#	US-PATENT-CLASS-324-158D	c 76	N76-20994 *	#	US-PATENT-CLASS-324-61	c 14	N71-27397 *	#
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US-PATENT-CLASS-322-25	c 33	N84-33660 *	#	US-PATENT-CLASS-324-158D	c 76	N85-30923 *	#	US-PATENT-CLASS-324-62	c 33	N80-32650 *	#
US-PATENT-CLASS-322-29	c 33	N83-28319 *	#	US-PATENT-CLASS-324-158R	c 76	N76-20994 *	#	US-PATENT-CLASS-324-64	c 15	N72-14654 *	#
US-PATENT-CLASS-322-29	c 33	N84-33660 *	#	US-PATENT-CLASS-324-158R	c 33	N85-30187 *	#	US-PATENT-CLASS-324-64	c 33	N80-32650 *	#
US-PATENT-CLASS-322-2	c 03	N72-23048 *	#	US-PATENT-CLASS-324-158T	c 15	N72-25457 *	#	US-PATENT-CLASS-324-65-P	c 35	N85-34373 *	#
US-PATENT-CLASS-322-32	c 09	N71-27364 *	#	US-PATENT-CLASS-324-158T	c 35	N75-12270 *	#	US-PATENT-CLASS-324-65P	c 14	N73-20478 *	#
US-PATENT-CLASS-322-35	c 33	N83-28319 *	#	US-PATENT-CLASS-324-158T	c 76	N76-20994 *	#	US-PATENT-CLASS-324-65R	c 15	N72-23497 *	#
US-PATENT-CLASS-322-47	c 33	N83-28319 *	#	US-PATENT-CLASS-324-158T	c 33	N80-14332 *	#	US-PATENT-CLASS-324-65R	c 33	N85-30187 *	#
US-PATENT-CLASS-322-47	c 33	N84-33660 *	#	US-PATENT-CLASS-324-158T	c 76	N84-35112 *	#	US-PATENT-CLASS-324-66	c 14	N71-27186 *	#
US-PATENT-CLASS-322-95	c 33	N83-28319 *	#	US-PATENT-CLASS-324-158	c 09	N69-21926 *	#	US-PATENT-CLASS-324-66	c 05	N72-16015 *	#
US-PATENT-CLASS-322-95	c 33	N84-33660 *	#	US-PATENT-CLASS-324-163	c 35	N77-30436 *	#	US-PATENT-CLASS-324-70	c 14	N70-41332 *	#
US-PATENT-CLASS-322-96	c 33	N77-26387 *	#	US-PATENT-CLASS-324-165	c 35	N77-30436 *	#	US-PATENT-CLASS-324-70	c 10	N71-22990 *	#
US-PATENT-CLASS-323-DIG.1	c 09	N72-21243 *	#	US-PATENT-CLASS-324-173	c 35	N78-32396 *	#	US-PATENT-CLASS-324-71.3	c 72	N84-28575 *	#
US-PATENT-CLASS-323-DIG.1	c 09	N72-25249 *	#	US-PATENT-CLASS-324-174	c 35	N77-30436 *	#	US-PATENT-CLASS-324-71.5	c 76	N85-30923 *	#
US-PATENT-CLASS-323-DIG.1	c 33	N74-11049 *	#	US-PATENT-CLASS-324-181	c 09	N71-24717 *	#	US-PATENT-CLASS-324-71CIP	c 35	N76-22509 *	#
US-PATENT-CLASS-323-DIG.1	c 33	N77-10428 *	#	US-PATENT-CLASS-324-186	c 52	N74-12778 *	#	US-PATENT-CLASS-324-71CP	c 35	N82-11431 *	#
US-PATENT-CLASS-323-106	c 33	N74-22885 *	#	US-PATENT-CLASS-324-20R	c 09	N72-23172 *	#	US-PATENT-CLASS-324-71R	c 09	N72-21246 *	#
US-PATENT-CLASS-323-122	c 33	N74-22885 *	#	US-PATENT-CLASS-324-20R	c 44	N79-12541 *	#	US-PATENT-CLASS-324-71R	c 15	N72-21464 *	#
US-PATENT-CLASS-323-128	c 33	N74-22885 *	#	US-PATENT-CLASS-324-207	c 35	N78-32396 *	#	US-PATENT-CLASS-324-71	c 09	N71-24843 *	#
US-PATENT-CLASS-323-15	c 20	N79-20179 *	#	US-PATENT-CLASS-324-226	c 35	N86-32698 *	#	US-PATENT-CLASS-324-72.5	c 44	N74-27519 *	#
US-PATENT-CLASS-323-15	c 44	N80-14472 *	#	US-PATENT-CLASS-324-22	c 44	N79-12541 *	#	US-PATENT-CLASS-324-72.5	c 72	N84-28575 *	#
US-PATENT-CLASS-323-17	c 09	N72-25249 *	#	US-PATENT-CLASS-324-238	c 35	N86-32698 *	#	US-PATENT-CLASS-324-72	c 10	N71-19421 *	#
US-PATENT-CLASS-323-17	c 33	N77-10428 *	#	US-PATENT-CLASS-324-240	c 35	N86-32698 *	#	US-PATENT-CLASS-324-72	c 14	N71-23699 *	#
US-PATENT-CLASS-323-18	c 33	N78-17295 *	#	US-PATENT-CLASS-324-249	c 35	N78-32397 *	#	US-PATENT-CLASS-324-72	c 07	N73-20175 *	#
US-PATENT-CLASS-323-19	c 08	N72-31226 *	#	US-PATENT-CLASS-324-250	c 35	N84-12444 *	#	US-PATENT-CLASS-324-72	c 14	N73-32318 *	#
US-PATENT-CLASS-323-19	c 33	N78-17296 *	#	US-PATENT-CLASS-324-262	c 35	N84-22928 *	#	US-PATENT-CLASS-324-72	c 33	N74-27862 *	#
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US-PATENT-CLASS-323-20	c 14	N71-27407 *	#	US-PATENT-CLASS-324-29.5	c 03	N72-25020 *	#	US-PATENT-CLASS-324-72	c 33	N77-10429 *	#
US-PATENT-CLASS-323-20	c 20	N79-20179 *	#	US-PATENT-CLASS-324-29.5	c 14	N73-30388 *	#	US-PATENT-CLASS-324-72	c 33	N79-10337 *	#
US-PATENT-CLASS-323-22T	c 09	N72-21243 *	#	US-PATENT-CLASS-324-30B	c 44	N74-27519 *	#	US-PATENT-CLASS-324-72	c 33	N79-14305 *	#
US-PATENT-CLASS-323-22T	c 09	N72-25249 *	#	US-PATENT-CLASS-324-30R	c 33	N76-19339 *	#	US-PATENT-CLASS-324-73AT	c 47	N82-24779 *	#
US-PATENT-CLASS-323-22T	c 33	N77-10428 *	#	US-PATENT-CLASS-324-32	c 14	N73-20478 *	#	US-PATENT-CLASS-324-73AT	c 08	N72-21666 *	#
US-PATENT-CLASS-323-22T	c 33	N79-23345 *	#	US-PATENT-CLASS-324-32	c 14	N71-16014 *	#	US-PATENT-CLASS-324-73R	c 33	N81-26359 *	#
US-PATENT-CLASS-323-22	c 09	N71-21449 *	#	US-PATENT-CLASS-324-32	c 33	N75-18477 *	#	US-PATENT-CLASS-324-73R	c 33	N83-18996 *	#
US-PATENT-CLASS-323-23	c 33	N77-10428 *	#	US-PATENT-CLASS-324-32	c 33	N75-19522 *	#	US-PATENT-CLASS-324-74	c 14	N71-28991 *	#
US-PATENT-CLASS-323-243	c 33	N84-16455 *	#	US-PATENT-CLASS-324-32	c 35	N78-28411 *	#	US-PATENT-CLASS-324-74	c 35	N78-28411 *	#
US-PATENT-CLASS-323-246	c 33	N84-16455 *	#	US-PATENT-CLASS-324-33	c 25	N69-39884 *	#	US-PATENT-CLASS-324-77B	c 60	N75-13539 *	#
US-PATENT-CLASS-323-269	c 33	N83-27126 *	#	US-PATENT-CLASS-324-33	c 14	N70-35666 *	#	US-PATENT-CLASS-324-77B	c 32	N79-10262 *	#



US-PATENT-CLASS-324-77R	c 47	N82-24779 *	#	US-PATENT-CLASS-325-419	c 10	N73-16205 *	#	US-PATENT-CLASS-328-145	c 32	N76-14321 *	#
US-PATENT-CLASS-324-77	c 09	N71-10659 *	#	US-PATENT-CLASS-325-419	c 07	N73-28012 *	#	US-PATENT-CLASS-328-145	c 09	N72-23173 *	#
US-PATENT-CLASS-324-77	c 07	N71-24622 *	#	US-PATENT-CLASS-325-419	c 32	N74-20810 *	#	US-PATENT-CLASS-328-145	c 33	N78-32339 *	#
US-PATENT-CLASS-324-78D	c 09	N72-25257 *	#	US-PATENT-CLASS-325-419	c 32	N74-20811 *	#	US-PATENT-CLASS-328-150	c 33	N78-18308 *	#
US-PATENT-CLASS-324-78D	c 52	N74-12778 *	#	US-PATENT-CLASS-325-419	c 32	N80-18253 *	#	US-PATENT-CLASS-328-151	c 09	N72-22200 *	#
US-PATENT-CLASS-324-78E	c 14	N73-24473 *	#	US-PATENT-CLASS-325-41	c 10	N71-26577 *	#	US-PATENT-CLASS-328-151	c 33	N75-18479 *	#
US-PATENT-CLASS-324-78J	c 10	N73-25240 *	#	US-PATENT-CLASS-325-41	c 32	N77-12240 *	#	US-PATENT-CLASS-328-151	c 33	N81-23996 *	#
US-PATENT-CLASS-324-78J	c 33	N75-19515 *	#	US-PATENT-CLASS-325-41	c 32	N79-10263 *	#	US-PATENT-CLASS-328-154	c 08	N72-22162 *	#
US-PATENT-CLASS-324-79D	c 14	N73-30386 *	#	US-PATENT-CLASS-325-41	c 32	N73-30113 *	#	US-PATENT-CLASS-328-154	c 10	N73-13235 *	#
US-PATENT-CLASS-324-79D	c 33	N76-16331 *	#	US-PATENT-CLASS-325-420	c 07	N73-30113 *	#	US-PATENT-CLASS-328-154	c 33	N74-22814 *	#
US-PATENT-CLASS-324-79R	c 14	N72-27408 *	#	US-PATENT-CLASS-325-422	c 07	N73-30113 *	#	US-PATENT-CLASS-328-155	c 10	N72-16172 *	#
US-PATENT-CLASS-324-79R	c 33	N84-16454 *	#	US-PATENT-CLASS-325-423	c 32	N74-20809 *	#	US-PATENT-CLASS-328-155	c 09	N72-33204 *	#
US-PATENT-CLASS-324-83A	c 10	N72-20224 *	#	US-PATENT-CLASS-325-42	c 07	N71-11266 *	#	US-PATENT-CLASS-328-155	c 33	N74-17927 *	#
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US-PATENT-CLASS-324-83D	c 33	N79-10338 *	#	US-PATENT-CLASS-325-445	c 07	N72-20141 *	#	US-PATENT-CLASS-328-160	c 32	N74-19788 *	#
US-PATENT-CLASS-324-83D	c 35	N74-21017 *	#	US-PATENT-CLASS-325-446	c 09	N69-24324 *	#	US-PATENT-CLASS-328-161	c 33	N77-17354 *	#
US-PATENT-CLASS-324-83D	c 33	N75-26243 *	#	US-PATENT-CLASS-325-45	c 07	N73-25160 *	#	US-PATENT-CLASS-328-163	c 33	N79-10338 *	#
US-PATENT-CLASS-324-83R	c 33	N84-16454 *	#	US-PATENT-CLASS-325-473	c 07	N71-33696 *	#	US-PATENT-CLASS-328-164	c 07	N71-33696 *	#
US-PATENT-CLASS-324-85	c 10	N72-20224 *	#	US-PATENT-CLASS-325-473	c 10	N73-12244 *	#	US-PATENT-CLASS-328-165	c 09	N71-24806 *	#
US-PATENT-CLASS-324-85	c 33	N79-10338 *	#	US-PATENT-CLASS-325-473	c 32	N77-30308 *	#	US-PATENT-CLASS-328-165	c 07	N71-33696 *	#
US-PATENT-CLASS-324-92	c 26	N72-25680 *	#	US-PATENT-CLASS-325-476	c 32	N77-10392 *	#	US-PATENT-CLASS-328-166	c 10	N72-20223 *	#
US-PATENT-CLASS-324-95	c 10	N71-12554 *	#	US-PATENT-CLASS-325-478	c 07	N71-33696 *	#	US-PATENT-CLASS-328-166	c 33	N82-29539 *	#
US-PATENT-CLASS-324-95	c 14	N73-30388 *	#	US-PATENT-CLASS-325-480	c 07	N71-33696 *	#	US-PATENT-CLASS-328-167	c 10	N71-22986 *	#
US-PATENT-CLASS-324-96	c 26	N72-25680 *	#	US-PATENT-CLASS-325-480	c 10	N73-12244 *	#	US-PATENT-CLASS-328-167	c 08	N71-29034 *	#
US-PATENT-CLASS-324-96	c 33	N79-10337 *	#	US-PATENT-CLASS-325-482	c 07	N71-33696 *	#	US-PATENT-CLASS-328-167	c 10	N72-17171 *	#
US-PATENT-CLASS-324-99D	c 33	N79-22373 *	#	US-PATENT-CLASS-325-492	c 09	N72-17153 *	#	US-PATENT-CLASS-328-167	c 09	N72-21245 *	#
US-PATENT-CLASS-325-10	c 07	N72-12081 *	#	US-PATENT-CLASS-325-492	c 09	N72-22022 *	#	US-PATENT-CLASS-328-167	c 09	N73-20231 *	#
US-PATENT-CLASS-325-113	c 07	N71-24840 *	#	US-PATENT-CLASS-325-4	c 07	N71-16088 *	#	US-PATENT-CLASS-328-167	c 08	N73-26175 *	#
US-PATENT-CLASS-325-113	c 07	N73-25160 *	#	US-PATENT-CLASS-325-4	c 07	N71-19773 *	#	US-PATENT-CLASS-328-167	c 33	N82-24417 *	#
US-PATENT-CLASS-325-113	c 52	N74-26625 *	#	US-PATENT-CLASS-325-4	c 07	N71-24621 *	#	US-PATENT-CLASS-328-167	c 33	N85-29145 *	#
US-PATENT-CLASS-325-114	c 07	N72-25171 *	#	US-PATENT-CLASS-325-4	c 07	N72-11149 *	#	US-PATENT-CLASS-328-168	c 32	N74-19788 *	#
US-PATENT-CLASS-325-114	c 03	N76-32140 *	#	US-PATENT-CLASS-325-4	c 07	N72-12080 *	#	US-PATENT-CLASS-328-168	c 10	N72-20223 *	#
US-PATENT-CLASS-325-114	c 03	N76-32140 *	#	US-PATENT-CLASS-325-4	c 07	N72-20140 *	#	US-PATENT-CLASS-328-171	c 10	N71-24844 *	#
US-PATENT-CLASS-325-118	c 17	N78-17140 *	#	US-PATENT-CLASS-325-4	c 07	N72-25171 *	#	US-PATENT-CLASS-328-172	c 32	N74-19788 *	#
US-PATENT-CLASS-325-12	c 07	N73-20174 *	#	US-PATENT-CLASS-325-4	c 07	N73-20174 *	#	US-PATENT-CLASS-328-172	c 33	N78-17294 *	#
US-PATENT-CLASS-325-139	c 07	N73-25160 *	#	US-PATENT-CLASS-325-4	c 15	N75-13007 *	#	US-PATENT-CLASS-328-186	c 09	N72-17157 *	#
US-PATENT-CLASS-325-13	c 07	N72-12081 *	#	US-PATENT-CLASS-325-4	c 32	N75-26195 *	#	US-PATENT-CLASS-328-187	c 10	N73-20254 *	#
US-PATENT-CLASS-325-141	c 07	N72-25173 *	#	US-PATENT-CLASS-325-4	c 32	N77-20289 *	#	US-PATENT-CLASS-328-189	c 14	N72-27408 *	#
US-PATENT-CLASS-325-141	c 52	N74-26625 *	#	US-PATENT-CLASS-325-4	c 32	N79-11265 *	#	US-PATENT-CLASS-328-190	c 33	N76-14371 *	#
US-PATENT-CLASS-325-143	c 05	N71-12342 *	#	US-PATENT-CLASS-325-4	c 32	N80-20448 *	#	US-PATENT-CLASS-328-192	c 60	N81-15706 *	#
US-PATENT-CLASS-325-145	c 32	N77-14292 *	#	US-PATENT-CLASS-325-51	c 07	N72-25173 *	#	US-PATENT-CLASS-328-1	c 23	N71-16099 *	#
US-PATENT-CLASS-325-148	c 32	N74-19790 *	#	US-PATENT-CLASS-325-51	c 07	N72-25173 *	#	US-PATENT-CLASS-328-1	c 10	N71-19472 *	#
US-PATENT-CLASS-325-14	c 17	N76-21250 *	#	US-PATENT-CLASS-325-58	c 07	N72-11149 *	#	US-PATENT-CLASS-328-1	c 09	N72-22200 *	#
US-PATENT-CLASS-325-14	c 32	N80-20448 *	#	US-PATENT-CLASS-325-58	c 07	N72-20140 *	#	US-PATENT-CLASS-328-207	c 09	N71-28468 *	#
US-PATENT-CLASS-325-151.11	c 08	N71-27057 *	#	US-PATENT-CLASS-325-58	c 07	N72-25173 *	#	US-PATENT-CLASS-328-207	c 10	N71-28860 *	#
US-PATENT-CLASS-325-159	c 33	N78-32340 *	#	US-PATENT-CLASS-325-58	c 32	N78-15323 *	#	US-PATENT-CLASS-328-207	c 09	N71-29139 *	#
US-PATENT-CLASS-325-163	c 07	N71-23405 *	#	US-PATENT-CLASS-325-58	c 32	N79-20296 *	#	US-PATENT-CLASS-328-207	c 10	N72-20221 *	#
US-PATENT-CLASS-325-16	c 07	N71-27056 *	#	US-PATENT-CLASS-325-58	c 07	N73-20174 *	#	US-PATENT-CLASS-328-20	c 10	N72-20223 *	#
US-PATENT-CLASS-325-17	c 07	N73-20174 *	#	US-PATENT-CLASS-325-60	c 08	N71-19763 *	#	US-PATENT-CLASS-328-230	c 35	N84-12444 *	#
US-PATENT-CLASS-325-185	c 07	N71-28430 *	#	US-PATENT-CLASS-325-60	c 07	N73-16121 *	#	US-PATENT-CLASS-328-233	c 10	N71-22962 *	#
US-PATENT-CLASS-325-186	c 03	N76-32140 *	#	US-PATENT-CLASS-325-61	c 32	N75-24981 *	#	US-PATENT-CLASS-328-233	c 75	N75-13625 *	#
US-PATENT-CLASS-325-187	c 33	N78-32340 *	#	US-PATENT-CLASS-325-61	c 07	N73-25160 *	#	US-PATENT-CLASS-328-233	c 37	N78-17386 *	#
US-PATENT-CLASS-325-23	c 07	N71-27056 *	#	US-PATENT-CLASS-325-62	c 08	N72-25208 *	#	US-PATENT-CLASS-328-24	c 09	N72-33204 *	#
US-PATENT-CLASS-325-29	c 09	N72-22202 *	#	US-PATENT-CLASS-325-62	c 44	N74-19870 *	#	US-PATENT-CLASS-328-27	c 08	N71-12503 *	#
US-PATENT-CLASS-325-302	c 07	N72-25173 *	#	US-PATENT-CLASS-325-63	c 10	N71-19467 *	#	US-PATENT-CLASS-328-37	c 10	N73-20254 *	#
US-PATENT-CLASS-325-304	c 32	N76-14321 *	#	US-PATENT-CLASS-325-63	c 07	N73-20174 *	#	US-PATENT-CLASS-328-37	c 33	N76-14373 *	#
US-PATENT-CLASS-325-305	c 07	N71-10775 *	#	US-PATENT-CLASS-325-63	c 32	N78-15323 *	#	US-PATENT-CLASS-328-37	c 33	N81-17349 *	#
US-PATENT-CLASS-325-305	c 10	N71-20841 *	#	US-PATENT-CLASS-325-63	c 32	N79-20296 *	#	US-PATENT-CLASS-328-38	c 10	N72-20223 *	#
US-PATENT-CLASS-325-305	c 07	N71-23098 *	#	US-PATENT-CLASS-325-64	c 07	N72-25173 *	#	US-PATENT-CLASS-328-38	c 33	N77-24375 *	#
US-PATENT-CLASS-325-305	c 32	N80-18253 *	#	US-PATENT-CLASS-325-65	c 07	N70-41331 *	#	US-PATENT-CLASS-328-39	c 33	N77-24375 *	#
US-PATENT-CLASS-325-306	c 32	N76-14321 *	#	US-PATENT-CLASS-325-65	c 07	N70-41372 *	#	US-PATENT-CLASS-328-4	c 33	N77-31330 *	#
US-PATENT-CLASS-325-307	c 32	N80-18253 *	#	US-PATENT-CLASS-325-65	c 07	N71-11284 *	#	US-PATENT-CLASS-328-41	c 33	N71-19432 *	#
US-PATENT-CLASS-325-30	c 32	N74-26654 *	#	US-PATENT-CLASS-325-66	c 32	N77-30308 *	#	US-PATENT-CLASS-328-44	c 08	N71-29034 *	#
US-PATENT-CLASS-325-30	c 32	N75-24981 *	#	US-PATENT-CLASS-325-67	c 17	N78-17140 *	#	US-PATENT-CLASS-328-48	c 14	N73-30386 *	#
US-PATENT-CLASS-325-30	c 32	N77-30308 *	#	US-PATENT-CLASS-325-67	c 07	N71-26292 *	#	US-PATENT-CLASS-328-48	c 33	N74-10223 *	#
US-PATENT-CLASS-325-31	c 07	N71-20791 *	#	US-PATENT-CLASS-325-67	c 10	N73-25241 *	#	US-PATENT-CLASS-328-48	c 60	N81-15706 *	#
US-PATENT-CLASS-325-320	c 33	N74-12887 *	#	US-PATENT-CLASS-325-67	c 35	N75-21582 *	#	US-PATENT-CLASS-328-49	c 10	N71-27137 *	#
US-PATENT-CLASS-325-320	c 32	N74-20809 *	#	US-PATENT-CLASS-325-67	c 32	N79-11265 *	#	US-PATENT-CLASS-328-55	c 33	N81-17349 *	#
US-PATENT-CLASS-325-320	c 32	N74-20811 *	#	US-PATENT-CLASS-325-70	c 07	N73-20174 *	#	US-PATENT-CLASS-328-58	c 08	N71-29138 *	#
US-PATENT-CLASS-325-320	c 33	N74-27705 *	#	US-PATENT-CLASS-325-8	c 07	N73-20174 *	#	US-PATENT-CLASS-328-58	c 33	N74-32711 *	#
US-PATENT-CLASS-325-321	c 07	N72-20140 *	#	US-PATENT-CLASS-325-9	c 07	N73-20174 *	#	US-PATENT-CLASS-328-59	c 33	N75-18479 *	#
US-PATENT-CLASS-325-321	c 32	N74-20810 *	#	US-PATENT-CLASS-325-9	c 32	N80-20448 *	#	US-PATENT-CLASS-328-61	c 33	N75-19515 *	#
US-PATENT-CLASS-325-321	c 32	N76-16249 *	#	US-PATENT-CLASS-328-104	c 08	N72-2162 *	#	US-PATENT-CLASS-328-61	c 09	N71-23525 *	#
US-PATENT-CLASS-325-323	c 32	N77-10392 *	#	US-PATENT-CLASS-328-104	c 10	N73-13235 *	#	US-PATENT-CLASS-328-61	c 10	N73-20254 *	#
US-PATENT-CLASS-325-323	c 07	N71-24613 *	#	US-PATENT-CLASS-328-106	c 09	N72-22201 *	#	US-PATENT-CLASS-328-61	c 35	N75-30504 *	#
US-PATENT-CLASS-325-325	c 07	N72-25173 *	#	US-PATENT-CLASS-328-110	c 09	N71-12519 *	#	US-PATENT-CLASS-328-61	c 35	N75-30504 *	#
US-PATENT-CLASS-325-325	c 07	N73-13149 *	#	US-PATENT-CLASS-328-111	c 60	N77-12721 *	#	US-PATENT-CLASS-328-63	c 33	N76-14371 *	#
US-PATENT-CLASS-325-346	c 10	N73-16205 *	#	US-PATENT-CLASS-328-115	c 33	N75-18479 *	#	US-PATENT-CLASS-328-63	c 33	N77-24375 *	#
US-PATENT-CLASS-325-346	c 32	N74-30523 *	#	US-PATENT-CLASS-328-116	c 09	N69-39885 *	#	US-PATENT-CLASS-328-67	c 10	N71-28960 *	#
US-PATENT-CLASS-325-347	c 32	N77-24331 *	#	US-PATENT-CLASS-328-116	c 09	N71-27016 *	#	US-PATENT-CLASS-328-67	c 33	N82-24418 *	#
US-PATENT-CLASS-325-348	c 07	N71-33696 *	#	US-PATENT-CLASS-328-123	c 60	N74-12888 *	#	US-PATENT-CLASS-328-71	c 60	N81-15706 *	#
US-PATENT-CLASS-325-348	c 07	N71-33696 *	#	US-PATENT-CLASS-328-129	c 14	N73-30386 *	#	US-PATENT-CLASS-328-92	c 10	N71-28860 *	#
US-PATENT-CLASS-325-349	c 32	N77-10392 *	#	US-PATENT-CLASS-328-133	c 09	N71-24596 *	#	US-PATENT-CLASS-329-104	c 07	N71-11282 *	#
US-PATENT-CLASS-325-363	c 07	N71-11267 *	#	US-PATENT-CLASS-328-133	c 10	N72-20224 *	#	US-PATENT-CLASS-329-104	c 33	N74-12887 *	#
US-PATENT-CLASS-325-363	c 14	N71-26774 *	#	US-PATENT-CLASS-328-133	c 33	N75-26243 *	#	US-PATENT-CLASS-329-104	c 32	N77-24331 *	#
US-PATENT-CLASS-325-363	c 10	N73-25241 *	#	US-PATENT-CLASS-328-133	c 33	N77-13315 *	#	US-PATENT-CLASS-329-104	c 35	N81-19427 *	#
US-PATENT-CLASS-325-363	c 35	N80-18359 *	#	US-PATENT-CLASS-328-133	c 33	N79-11131 *	#	US-PATENT-CLASS-329-119	c 33	N72-21314 *	#
US-PATENT-CLASS-325-369	c 07	N71-27056 *	#	US-PATENT-CLASS-328-134	c 33	N84-16454 *	#	US-PATENT-CLASS-329-120	c 07	N73-30113 *	#

US-PATENT-CLASS-329-122	c 33	N81-33405 *	#	US-PATENT-CLASS-330-258	c 33	N86-20670 *	#	US-PATENT-CLASS-331-108D	c 33	N86-32624 *	#
US-PATENT-CLASS-329-124	c 33	N77-14334 *	#	US-PATENT-CLASS-330-261	c 33	N86-20670 *	#	US-PATENT-CLASS-331-109	c 10	N71-27271 *	#
US-PATENT-CLASS-329-124	c 33	N78-32338 *	#	US-PATENT-CLASS-330-26	c 10	N72-17172 *	#	US-PATENT-CLASS-331-109	c 33	N74-26732 *	#
US-PATENT-CLASS-329-124	c 32	N84-27952 *	#	US-PATENT-CLASS-330-27R	c 10	N72-31273 *	#	US-PATENT-CLASS-331-110	c 07	N72-11150 *	#
US-PATENT-CLASS-329-126	c 33	N74-12887 *	#	US-PATENT-CLASS-330-277	c 33	N84-22887 *	#	US-PATENT-CLASS-331-111	c 10	N71-23669 *	#
US-PATENT-CLASS-329-140	c 07	N71-24583 *	#	US-PATENT-CLASS-330-282	c 33	N83-36356 *	#	US-PATENT-CLASS-331-111	c 09	N72-21247 *	#
US-PATENT-CLASS-329-145	c 07	N71-33696 *	#	US-PATENT-CLASS-330-289	c 33	N83-34191 *	#	US-PATENT-CLASS-331-113A	c 09	N72-25253 *	#
US-PATENT-CLASS-329-161	c 07	N72-20141 *	#	US-PATENT-CLASS-330-289	c 33	N84-18454 *	#	US-PATENT-CLASS-331-113A	c 09	N72-25254 *	#
US-PATENT-CLASS-329-162	c 07	N72-20141 *	#	US-PATENT-CLASS-330-28	c 33	N74-21851 *	#	US-PATENT-CLASS-331-113A	c 33	N74-11049 *	#
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US-PATENT-CLASS-329-166	c 33	N75-25041 *	#	US-PATENT-CLASS-330-290	c 33	N82-24417 *	#	US-PATENT-CLASS-331-113	c 09	N70-38995 *	#
US-PATENT-CLASS-329-204	c 33	N75-19520 *	#	US-PATENT-CLASS-330-294	c 33	N82-24417 *	#	US-PATENT-CLASS-331-113	c 10	N71-19418 *	#
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US-PATENT-CLASS-329.8UB	c 27	N81-19427 *	#	US-PATENT-CLASS-330-2	c 09	N69-39896 *	#	US-PATENT-CLASS-331-113	c 09	N71-28810 *	#
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US-PATENT-CLASS-33-DIG.3	c 04	N84-14132 *	#	US-PATENT-CLASS-330-2	c 33	N78-10375 *	#	US-PATENT-CLASS-331-115	c 10	N72-33230 *	#
US-PATENT-CLASS-33-IG	c 37	N76-21554 *	#	US-PATENT-CLASS-330-2	c 33	N79-22373 *	#	US-PATENT-CLASS-331-115	c 33	N74-20862 *	#
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US-PATENT-CLASS-33-1N	c 43	N79-26439 *	#	US-PATENT-CLASS-330-30D	c 09	N73-20232 *	#	US-PATENT-CLASS-331-116R	c 10	N72-33230 *	#
US-PATENT-CLASS-33-1Q	c 43	N79-26439 *	#	US-PATENT-CLASS-330-302	c 33	N85-29145 *	#	US-PATENT-CLASS-331-116R	c 33	N74-20862 *	#
US-PATENT-CLASS-33-1SA	c 14	N72-28436 *	#	US-PATENT-CLASS-330-306	c 33	N82-24417 *	#	US-PATENT-CLASS-331-116R	c 33	N86-32624 *	#
US-PATENT-CLASS-33-1SA	c 19	N74-21015 *	#	US-PATENT-CLASS-330-306	c 33	N85-29145 *	#	US-PATENT-CLASS-331-117FE	c 33	N86-19515 *	#
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US-PATENT-CLASS-33-125	c 14	N72-11364 *	#	US-PATENT-CLASS-330-30	c 09	N71-19516 *	#	US-PATENT-CLASS-331-117	c 10	N71-27271 *	#
US-PATENT-CLASS-33-143C	c 52	N82-22875 *	#	US-PATENT-CLASS-330-30	c 09	N71-27016 *	#	US-PATENT-CLASS-331-117	c 09	N72-22203 *	#
US-PATENT-CLASS-33-147	c 15	N71-19489 *	#	US-PATENT-CLASS-330-310	c 33	N83-34191 *	#	US-PATENT-CLASS-331-112	c 33	N78-32338 *	#
US-PATENT-CLASS-33-148D	c 35	N75-19615 *	#	US-PATENT-CLASS-330-311	c 33	N86-20670 *	#	US-PATENT-CLASS-331-135	c 10	N73-32145 *	#
US-PATENT-CLASS-33-149	c 14	N71-17657 *	#	US-PATENT-CLASS-330-31	c 10	N71-26331 *	#	US-PATENT-CLASS-331-14	c 09	N72-21247 *	#
US-PATENT-CLASS-33-15A	c 08	N72-11172 *	#	US-PATENT-CLASS-330-31	c 10	N72-17172 *	#	US-PATENT-CLASS-331-14	c 33	N74-10194 *	#
US-PATENT-CLASS-33-155R	c 33	N76-19338 *	#	US-PATENT-CLASS-330-35	c 09	N72-17156 *	#	US-PATENT-CLASS-331-14	c 33	N79-11313 *	#
US-PATENT-CLASS-33-169F	c 35	N84-28018 *	#	US-PATENT-CLASS-330-35	c 09	N73-20232 *	#	US-PATENT-CLASS-331-159	c 33	N74-20862 *	#
US-PATENT-CLASS-33-174B	c 37	N76-21554 *	#	US-PATENT-CLASS-330-35	c 33	N74-14939 *	#	US-PATENT-CLASS-331-177R	c 09	N73-15235 *	#
US-PATENT-CLASS-33-174D	c 33	N76-19338 *	#	US-PATENT-CLASS-330-4.3	c 16	N73-32391 *	#	US-PATENT-CLASS-331-177V	c 33	N77-17351 *	#
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US-PATENT-CLASS-33-174S	c 14	N72-22445 *	#	US-PATENT-CLASS-330-4.3	c 36	N75-27364 *	#	US-PATENT-CLASS-331-178	c 33	N74-10194 *	#
US-PATENT-CLASS-33-174	c 14	N69-21363 *	#	US-PATENT-CLASS-330-4.3	c 36	N75-32441 *	#	US-PATENT-CLASS-331-17	c 10	N71-20852 *	#
US-PATENT-CLASS-33-174	c 14	N71-17658 *	#	US-PATENT-CLASS-330-4.3	c 36	N76-29575 *	#	US-PATENT-CLASS-331-17	c 10	N73-27171 *	#
US-PATENT-CLASS-33-174	c 14	N71-24693 *	#	US-PATENT-CLASS-330-4.3	c 36	N77-25502 *	#	US-PATENT-CLASS-331-17	c 33	N74-10194 *	#
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US-PATENT-CLASS-33-1	c 14	N70-36907 *	#	US-PATENT-CLASS-330-4.5	c 09	N72-25258 *	#	US-PATENT-CLASS-331-18	c 33	N74-10194 *	#
US-PATENT-CLASS-33-204C	c 08	N72-11172 *	#	US-PATENT-CLASS-330-4.9	c 33	N74-32660 *	#	US-PATENT-CLASS-331-18	c 33	N75-25040 *	#
US-PATENT-CLASS-33-207	c 15	N71-15571 *	#	US-PATENT-CLASS-330-40	c 07	N71-28430 *	#	US-PATENT-CLASS-331-23	c 09	N72-21247 *	#
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US-PATENT-CLASS-33-268	c 89	N74-30886 *	#	US-PATENT-CLASS-330-40	c 09	N73-20232 *	#	US-PATENT-CLASS-331-23	c 33	N79-11313 *	#
US-PATENT-CLASS-33-285	c 36	N74-21091 *	#	US-PATENT-CLASS-330-40	c 33	N75-30428 *	#	US-PATENT-CLASS-331-25	c 10	N73-27171 *	#
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US-PATENT-CLASS-33-356	c 04	N76-20114 *	#	US-PATENT-CLASS-330-4	c 16	N71-24831 *	#	US-PATENT-CLASS-331-34	c 07	N72-11150 *	#
US-PATENT-CLASS-33-356	c 04	N77-19056 *	#	US-PATENT-CLASS-330-4	c 16	N72-28521 *	#	US-PATENT-CLASS-331-36C	c 33	N77-14334 *	#
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US-PATENT-CLASS-33-366	c 35	N78-32395 *	#	US-PATENT-CLASS-330-4	c 36	N78-18410 *	#	US-PATENT-CLASS-331-3	c 33	N85-29143 *	#
US-PATENT-CLASS-33-46R	c 19	N74-21015 *	#	US-PATENT-CLASS-330-4	c 36	N80-18372 *	#	US-PATENT-CLASS-331-44	c 14	N72-27408 *	#
US-PATENT-CLASS-33-72	c 15	N72-11386 *	#	US-PATENT-CLASS-330-4	c 36	N83-35350 *	#	US-PATENT-CLASS-331-45	c 10	N73-16206 *	#
US-PATENT-CLASS-33-75R	c 14	N72-28436 *	#	US-PATENT-CLASS-330-5.5	c 71	N77-26919 *	#	US-PATENT-CLASS-331-48	c 33	N81-17349 *	#
US-PATENT-CLASS-33-96	c 33	N75-30430 *	#	US-PATENT-CLASS-330-51	c 10	N71-28859 *	#	US-PATENT-CLASS-331-4	c 09	N69-21543 *	#
US-PATENT-CLASS-330-103	c 32	N74-22096 *	#	US-PATENT-CLASS-330-51	c 33	N79-22373 *	#	US-PATENT-CLASS-331-4	c 33	N74-10194 *	#
US-PATENT-CLASS-330-107	c 10	N72-11256 *	#	US-PATENT-CLASS-330-52	c 71	N78-14867 *	#	US-PATENT-CLASS-331-4	c 33	N78-32338 *	#
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US-PATENT-CLASS-330-109	c 10	N72-17171 *	#	US-PATENT-CLASS-330-59	c 33	N77-14335 *	#	US-PATENT-CLASS-331-65	c 33	N80-23559 *	#
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US-PATENT-CLASS-330-11	c 09	N72-17156 *	#	US-PATENT-CLASS-330-85	c 09	N72-21245 *	#	US-PATENT-CLASS-331-94.5A	c 16	N73-33397 *	#
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US-PATENT-CLASS-330-18	c 33	N75-30428 *	#	US-PATENT-CLASS-331-1A	c 33	N74-10194 *	#	US-PATENT-CLASS-331-94.5D	c 36	N77-25502 *	#
US-PATENT-CLASS											

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US-PATENT-CLASS-331-94.5L	c 72	N79-13826 *	#	US-PATENT-CLASS-333-252	c 32	N80-32605 *	#	US-PATENT-CLASS-338-283	c 24	N75-30260 *	#
US-PATENT-CLASS-331-94.5M	c 36	N75-19654 *	#	US-PATENT-CLASS-333-254	c 32	N83-27085 *	#	US-PATENT-CLASS-338-28	c 35	N77-20400 *	#
US-PATENT-CLASS-331-94.5PE	c 36	N75-32441 *	#	US-PATENT-CLASS-333-262	c 33	N80-18285 *	#	US-PATENT-CLASS-338-28	c 35	N77-24454 *	#
US-PATENT-CLASS-331-94.5PE	c 36	N77-19416 *	#	US-PATENT-CLASS-333-30	c 10	N71-25900 *	#	US-PATENT-CLASS-338-28	c 35	N82-24470 *	#
US-PATENT-CLASS-331-94.5PE	c 36	N78-27402 *	#	US-PATENT-CLASS-333-6	c 07	N71-33606 *	#	US-PATENT-CLASS-338-2	c 33	N75-31329 *	#
US-PATENT-CLASS-331-94.5PE	c 72	N79-13826 *	#	US-PATENT-CLASS-333-70CR	c 10	N72-17171 *	#	US-PATENT-CLASS-338-2	c 35	N80-20560 *	#
US-PATENT-CLASS-331-94.5PE	c 33	N82-24418 *	#	US-PATENT-CLASS-333-70R	c 32	N77-18307 *	#	US-PATENT-CLASS-338-2	c 52	N80-27072 *	#
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US-PATENT-CLASS-331-94.5P	c 36	N75-31426 *	#	US-PATENT-CLASS-333-72	c 71	N77-26919 *	#	US-PATENT-CLASS-338-309	c 27	N84-33589 *	#
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US-PATENT-CLASS-331-94.5P	c 72	N79-13826 *	#	US-PATENT-CLASS-333-73W	c 07	N72-20141 *	#	US-PATENT-CLASS-338-36	c 35	N78-17359 *	#
US-PATENT-CLASS-331-94.5P	c 36	N79-18307 *	#	US-PATENT-CLASS-333-73	c 07	N69-24323 *	#	US-PATENT-CLASS-338-5	c 32	N71-15974 *	#
US-PATENT-CLASS-331-94.5P	c 36	N80-14384 *	#	US-PATENT-CLASS-333-73	c 09	N71-23573 *	#	US-PATENT-CLASS-338-5	c 52	N74-27864 *	#
US-PATENT-CLASS-331-94.5P	c 36	N82-13415 *	#	US-PATENT-CLASS-333-75	c 32	N77-18307 *	#	US-PATENT-CLASS-338-64	c 09	N71-21583 *	#
US-PATENT-CLASS-331-94.5S	c 36	N74-15145 *	#	US-PATENT-CLASS-333-76	c 32	N77-18307 *	#	US-PATENT-CLASS-338-6	c 35	N76-14430 *	#
US-PATENT-CLASS-331-94.5S	c 36	N77-25499 *	#	US-PATENT-CLASS-333-79	c 10	N70-41964 *	#	US-PATENT-CLASS-338-6	c 52	N76-29895 *	#
US-PATENT-CLASS-331-94.5T	c 35	N77-27366 *	#	US-PATENT-CLASS-333-79	c 09	N72-25256 *	#	US-PATENT-CLASS-338-75	c 37	N75-13265 *	#
US-PATENT-CLASS-331-94.5T	c 36	N78-17366 *	#	US-PATENT-CLASS-333-7	c 07	N71-33606 *	#	US-PATENT-CLASS-338-82	c 09	N71-20842 *	#
US-PATENT-CLASS-331-94.5	c 16	N71-18614 *	#	US-PATENT-CLASS-333-7	c 07	N72-25170 *	#	US-PATENT-CLASS-338-89	c 35	N74-32877 *	#
US-PATENT-CLASS-331-94.5	c 16	N71-24832 *	#	US-PATENT-CLASS-333-7	c 07	N74-32712 *	#	US-PATENT-CLASS-338-97	c 37	N75-13265 *	#
US-PATENT-CLASS-331-94.5	c 23	N71-26722 *	#	US-PATENT-CLASS-333-80R	c 33	N72-32320 *	#	US-PATENT-CLASS-338-99	c 35	N78-17359 *	#
US-PATENT-CLASS-331-94.5	c 15	N71-27135 *	#	US-PATENT-CLASS-333-80	c 10	N71-12517 *	#	US-PATENT-CLASS-339-143C	c 33	N76-16332 *	#
US-PATENT-CLASS-331-94.5	c 23	N71-29125 *	#	US-PATENT-CLASS-333-80	c 09	N72-21245 *	#	US-PATENT-CLASS-339-143R	c 09	N72-25256 *	#
US-PATENT-CLASS-331-94.5	c 16	N71-33410 *	#	US-PATENT-CLASS-333-81B	c 14	N73-13420 *	#	US-PATENT-CLASS-339-147R	c 09	N72-25256 *	#
US-PATENT-CLASS-331-94.5	c 16	N72-12440 *	#	US-PATENT-CLASS-333-81R	c 07	N72-25170 *	#	US-PATENT-CLASS-339-150	c 09	N69-21470 *	#
US-PATENT-CLASS-331-94.5	c 25	N72-24753 *	#	US-PATENT-CLASS-333-81R	c 33	N78-32340 *	#	US-PATENT-CLASS-339-17M	c 37	N76-27567 *	#
US-PATENT-CLASS-331-94.5	c 16	N72-25485 *	#	US-PATENT-CLASS-333-81R	c 32	N80-14281 *	#	US-PATENT-CLASS-339-17R	c 15	N71-29133 *	#
US-PATENT-CLASS-331-94.5	c 07	N73-26119 *	#	US-PATENT-CLASS-333-81	c 07	N71-29065 *	#	US-PATENT-CLASS-339-176MF	c 09	N72-28225 *	#
US-PATENT-CLASS-331-94.5	c 09	N73-32111 *	#	US-PATENT-CLASS-333-82A	c 09	N73-26195 *	#	US-PATENT-CLASS-339-176M	c 15	N72-17455 *	#
US-PATENT-CLASS-331-94.5	c 16	N73-32391 *	#	US-PATENT-CLASS-333-82B	c 32	N77-18307 *	#	US-PATENT-CLASS-339-176	c 09	N70-34596 *	#
US-PATENT-CLASS-331-94.5	c 36	N76-18427 *	#	US-PATENT-CLASS-333-83BT	c 33	N75-30430 *	#	US-PATENT-CLASS-339-176	c 09	N70-36494 *	#
US-PATENT-CLASS-331-94.5G	c 36	N75-32441 *	#	US-PATENT-CLASS-333-83R	c 36	N74-11313 *	#	US-PATENT-CLASS-339-177	c 09	N71-20851 *	#
US-PATENT-CLASS-331-94	c 16	N70-41578 *	#	US-PATENT-CLASS-333-83	c 09	N71-24841 *	#	US-PATENT-CLASS-339-17	c 14	N69-27431 *	#
US-PATENT-CLASS-331-94	c 16	N72-28521 *	#	US-PATENT-CLASS-333-84M	c 09	N73-26195 *	#	US-PATENT-CLASS-339-17	c 15	N71-17685 *	#
US-PATENT-CLASS-331-94	c 16	N73-13489 *	#	US-PATENT-CLASS-333-8	c 07	N69-24334 *	#	US-PATENT-CLASS-339-17	c 09	N71-26133 *	#
US-PATENT-CLASS-331-94	c 35	N76-15436 *	#	US-PATENT-CLASS-333-85	c 07	N71-27191 *	#	US-PATENT-CLASS-339-18C	c 37	N76-27567 *	#
US-PATENT-CLASS-331-94	c 36	N76-31512 *	#	US-PATENT-CLASS-333-96	c 09	N71-20445 *	#	US-PATENT-CLASS-339-19BR	c 33	N76-16332 *	#
US-PATENT-CLASS-331-94	c 36	N79-14362 *	#	US-PATENT-CLASS-333-96	c 07	N71-27191 *	#	US-PATENT-CLASS-339-218M	c 09	N72-28225 *	#
US-PATENT-CLASS-331-94	c 36	N80-18372 *	#	US-PATENT-CLASS-333-97R	c 36	N74-11313 *	#	US-PATENT-CLASS-339-242	c 33	N76-16332 *	#
US-PATENT-CLASS-331-96	c 33	N85-29143 *	#	US-PATENT-CLASS-333-97	c 07	N69-27462 *	#	US-PATENT-CLASS-339-252R	c 52	N77-14738 *	#
US-PATENT-CLASS-332-10	c 08	N71-29138 *	#	US-PATENT-CLASS-333-98P	c 07	N72-25170 *	#	US-PATENT-CLASS-339-258RR	c 33	N84-14423 *	#
US-PATENT-CLASS-332-11D	c 35	N74-17885 *	#	US-PATENT-CLASS-333-98P	c 09	N72-29172 *	#	US-PATENT-CLASS-339-262RR	c 33	N84-14423 *	#
US-PATENT-CLASS-332-16	c 33	N77-21314 *	#	US-PATENT-CLASS-333-98P	c 07	N72-25170 *	#	US-PATENT-CLASS-339-275R	c 33	N76-16332 *	#
US-PATENT-CLASS-332-18	c 33	N77-17351 *	#	US-PATENT-CLASS-333-98P	c 09	N72-29172 *	#	US-PATENT-CLASS-339-275T	c 09	N72-20200 *	#
US-PATENT-CLASS-332-19	c 10	N71-23544 *	#	US-PATENT-CLASS-333-98P	c 14	N73-13420 *	#	US-PATENT-CLASS-339-276T	c 09	N72-20200 *	#
US-PATENT-CLASS-332-1	c 10	N71-23084 *	#	US-PATENT-CLASS-333-98P	c 33	N75-30430 *	#	US-PATENT-CLASS-339-278M	c 15	N72-17455 *	#
US-PATENT-CLASS-332-1	c 08	N72-25208 *	#	US-PATENT-CLASS-333-98S	c 07	N72-25170 *	#	US-PATENT-CLASS-339-3R	c 07	N83-20944 *	#
US-PATENT-CLASS-332-21	c 32	N77-14292 *	#	US-PATENT-CLASS-333-98	c 09	N71-23548 *	#	US-PATENT-CLASS-339-45M	c 15	N72-25450 *	#
US-PATENT-CLASS-332-22	c 33	N81-15192 *	#	US-PATENT-CLASS-333-98	c 09	N71-24808 *	#	US-PATENT-CLASS-339-46	c 15	N72-17455 *	#
US-PATENT-CLASS-332-23R	c 32	N77-14292 *	#	US-PATENT-CLASS-333-98S	c 32	N80-32605 *	#	US-PATENT-CLASS-339-5R	c 07	N83-20944 *	#
US-PATENT-CLASS-332-23R	c 33	N81-15192 *	#	US-PATENT-CLASS-333-99S	c 37	N85-30333 *	#	US-PATENT-CLASS-339-5	c 15	N71-23049 *	#
US-PATENT-CLASS-332-29	c 07	N71-28429 *	#	US-PATENT-CLASS-335-205	c 09	N72-20199 *	#	US-PATENT-CLASS-339-64M	c 33	N84-14423 *	#
US-PATENT-CLASS-332-2	c 35	N75-19614 *	#	US-PATENT-CLASS-335-216	c 16	N71-28554 *	#	US-PATENT-CLASS-339-75MP	c 09	N72-28225 *	#
US-PATENT-CLASS-332-30V	c 33	N77-14334 *	#	US-PATENT-CLASS-335-216	c 23	N71-29049 *	#	US-PATENT-CLASS-339-91B	c 15	N72-25450 *	#
US-PATENT-CLASS-332-30V	c 33	N77-17351 *	#	US-PATENT-CLASS-335-216	c 26	N73-32571 *	#	US-PATENT-CLASS-339-91	c 09	N69-21927 *	#
US-PATENT-CLASS-332-30	c 10	N71-27271 *	#	US-PATENT-CLASS-335-216	c 20	N75-24837 *	#	US-PATENT-CLASS-339-94M	c 09	N72-28225 *	#
US-PATENT-CLASS-332-30	c 07	N71-28429 *	#	US-PATENT-CLASS-335-216	c 33	N79-21264 *	#	US-PATENT-CLASS-339-95	c 09	N69-39734 *	#
US-PATENT-CLASS-332-30	c 33	N77-21314 *	#	US-PATENT-CLASS-335-222	c 35	N84-28017 *	#	US-PATENT-CLASS-339-12R	c 52	N77-25772 *	#
US-PATENT-CLASS-332-31	c 08	N71-12500 *	#	US-PATENT-CLASS-335-229	c 33	N82-24421 *	#	US-PATENT-CLASS-34-155	c 14	N73-28489 *	#
US-PATENT-CLASS-332-31	c 26	N72-21701 *	#	US-PATENT-CLASS-335-256	c 33	N82-11357 *	#	US-PATENT-CLASS-34-15	c 28	N78-24365 *	#
US-PATENT-CLASS-332-47	c 33	N75-19520 *	#	US-PATENT-CLASS-335-266	c 33	N82-11357 *	#	US-PATENT-CLASS-34-160	c 14	N73-28489 *	#
US-PATENT-CLASS-332-51W	c 07	N72-20141 *	#	US-PATENT-CLASS-335-266	c 33	N82-24421 *	#	US-PATENT-CLASS-34-162	c 14	N73-28489 *	#
US-PATENT-CLASS-332-52	c 33	N77-21314 *	#	US-PATENT-CLASS-335-296	c 09	N73-30185 *	#	US-PATENT-CLASS-34-162	c 35	N74-15831 *	#
US-PATENT-CLASS-332-7.51	c 16	N72-25485 *	#	US-PATENT-CLASS-335-297	c 09	N73-30185 *	#	US-PATENT-CLASS-34-57A	c 35	N83-24828 *	#
US-PATENT-CLASS-332-7.51	c 07	N73-26119 *	#	US-PATENT-CLASS-335-300	c 09	N70-41929 *	#	US-PATENT-CLASS-34-12R	c 35	N74-16135 *	#
US-PATENT-CLASS-332-7.51	c 33	N74-20859 *	#	US-PATENT-CLASS-336-DIG.1	c 26	N73-26752 *	#	US-PATENT-CLASS-34-12R	c 46	N79-23555 *	#
US-PATENT-CLASS-332-7.51	c 36	N76-18427 *	#	US-PATENT-CLASS-336-DIG.1	c 33	N79-17133 *	#	US-PATENT-CLASS-34-146.1AL	c 08	N72-25210 *	#
US-PATENT-CLASS-332-7.5	c 36	N75-15029 *	#	US-PATENT-CLASS-336-120	c 33	N82-24422 *	#	US-PATENT-CLASS-34-146.1AL	c 08	N73-12175 *	#
US-PATENT-CLASS-332-7.5	c 36	N78-18410 *	#	US-PATENT-CLASS-336-178	c 09	N72-17154 *	#	US-PATENT-CLASS-34-146.1AL	c 32	N77-12240 *	#
US-PATENT-CLASS-332-7.5	c 36	N83-35350 *	#	US-PATENT-CLASS-336-198	c 09	N72-27226 *	#	US-PATENT-CLASS-34-146.1AQ	c 08	N73-12177 *	#
US-PATENT-CLASS-332-751	c 36	N80-16321 *	#	US-PATENT-CLASS-336-198	c 33	N85-29146 *	#	US-PATENT-CLASS-34-146.1AQ	c 32	N74-32598 *	#
US-PATENT-CLASS-332-9R	c 08	N71-29138 *	#	US-PATENT-CLASS-336-200	c 26	N73-26752 *	#	US-PATENT-CLASS-34-146.1AQ	c 32	N77-12240 *	#
US-PATENT-CLASS-332-9	c 07	N71-12390 *	#	US-PATENT-CLASS-336-210	c 33	N74-17928 *	#	US-PATENT-CLASS-34-146.1AV	c 08	N77-12177 *	#
US-PATENT-CLASS-333-104	c 33	N82-16340 *	#	US-PATENT-CLASS-336-220	c 09	N72-27226 *	#	US-PATENT-CLASS-34-146.1AV	c 32	N77-12240 *	#
US-PATENT-CLASS-333-12	c 32	N80-32605 *	#	US-PATENT-CLASS-336-60	c 09	N72-27226 *	#	US-PATENT-CLASS-34-146.1AX	c 32	N79-10263 *	#
US-PATENT-CLASS-333-12	c 33	N81-27397 *	#	US-PATENT-CLASS-336-83	c 33	N82-24422 *	#	US-PATENT-CLASS-34-146.1C	c 07	N73-20176 *	#
US-PATENT-CLASS-333-14	c 32	N74-19788 *	#	US-PATENT-CLASS-336-84C	c 33	N85-29146 *	#	US-PATENT-CLASS-34-146.1E	c 32	N79-10263 *	#
US-PATENT-CLASS-333-162	c 33	N84-16452 *	#	US-PATENT-CLASS-337-114	c 09	N71-29035 *	#	US-PATENT-CLASS-34-146.1	c 09	N71-18843 *	#
US-PATENT-CLASS-333-162	c 33	N84-27974 *	#	US-PATENT-CLASS-337-121	c 09	N71-29035 *	#	US-PATENT-CLASS-34-146.1	c 08	N71-22749 *	#
US-PATENT-CLASS-333-16	c 33	N74-17927 *	#	US-PATENT-CLASS-337-140	c 37	N86-19604 *	#	US-PATENT-CLASS-34-146.1	c 10	N71-26103 *	#
US-PATENT-CLASS-333-17R	c 33	N78-32340 *	#	US-PATENT-CLASS-337-14	c 31	N83-31897 *	#	US-PATENT-CLASS-34-146.1	c 08	N71-27255 *	#
US-PATENT-CLASS-333-17	c 44	N74-19870 *	#	US-PATENT-CLASS-337-334	c 37	N77-19458 *	#	US-PATENT-CLASS-34-146.1	c 08	N72-22167 *	#
US-PATENT-CLASS-333-18	c 33	N74-17927 *	#	US-PATENT-CLASS-337-354	c 15	N72-12409 *	#	US-PATENT-CLASS-34-146.1	c 08	N72-25207 *	#
US-PATENT-CLASS-333-18	c 32	N76-21366 *	#	US-PATENT-CLASS-337-359	c 15	N72-12409 *	#	US-PATENT-CLASS-34-146.1	c 07	N73-13149 *	#
US-PATENT-CLASS-333-204	c 33	N81-17348 *	#	US-PATENT-CLASS-337-75	c 15	N72-12409 *	#	US-PATENT-CLASS-34-146.2	c 08	N71-12505 *	#
US-PATENT-CLASS-333-204	c										

US-PATENT-CLASS-340-147SY .. c 17	N76-22245 * #	US-PATENT-CLASS-340-235 .. c 10	N71-26334 *	US-PATENT-CLASS-340-605 .. c 25	N86-27431 * #
US-PATENT-CLASS-340-147 .. c 09	N70-33182 *	US-PATENT-CLASS-340-237S .. c 45	N76-17656 * #	US-PATENT-CLASS-340-650 .. c 33	N79-18193 * #
US-PATENT-CLASS-340-147 .. c 09	N70-38998 * #	US-PATENT-CLASS-340-240 .. c 09	N72-27227 * #	US-PATENT-CLASS-340-664 .. c 33	N79-18193 * #
US-PATENT-CLASS-340-155GC .. c 14	N73-26432 * #	US-PATENT-CLASS-340-242 .. c 35	N75-19612 * #	US-PATENT-CLASS-340-705 .. c 06	N84-27733 * #
US-PATENT-CLASS-340-150 .. c 10	N71-27272 *	US-PATENT-CLASS-340-248 .. c 10	N71-27338 *	US-PATENT-CLASS-340-8LF .. c 71	N79-23753 * #
US-PATENT-CLASS-340-151 .. c 33	N74-27862 * #	US-PATENT-CLASS-340-258R .. c 07	N73-25180 * #	US-PATENT-CLASS-340-8R .. c 35	N74-16135 * #
US-PATENT-CLASS-340-163 .. c 07	N73-20176 * #	US-PATENT-CLASS-340-258 .. c 10	N72-28240 * #	US-PATENT-CLASS-340-825.21 .. c 60	N84-28492 * #
US-PATENT-CLASS-340-164 .. c 10	N71-27272 *	US-PATENT-CLASS-340-25 .. c 14	N73-16483 * #	US-PATENT-CLASS-340-825.5 .. c 80	N84-28492 * #
US-PATENT-CLASS-340-166 .. c 10	N71-27272 *	US-PATENT-CLASS-340-262 .. c 54	N78-32720 * #	US-PATENT-CLASS-340-825.89 .. c 33	N82-29538 * #
US-PATENT-CLASS-340-166 .. c 10	N73-32144 * #	US-PATENT-CLASS-340-26 .. c 21	N72-22619 * #	US-PATENT-CLASS-340-870.13 .. c 35	N84-22934 * #
US-PATENT-CLASS-340-167 .. c 07	N72-25173 * #	US-PATENT-CLASS-340-26 .. c 04	N82-16059 * #	US-PATENT-CLASS-340-870.24 .. c 33	N81-14221 * #
US-PATENT-CLASS-340-171 .. c 09	N72-22202 * #	US-PATENT-CLASS-340-27AT .. c 21	N73-14692 * #	US-PATENT-CLASS-340-905 .. c 35	N84-33769 * #
US-PATENT-CLASS-340-171 .. c 16	N73-16536 * #	US-PATENT-CLASS-340-27NA .. c 21	N73-13643 * #	US-PATENT-CLASS-340-988 .. c 06	N86-27280 * #
US-PATENT-CLASS-340-172.5 .. c 08	N89-21928 * #	US-PATENT-CLASS-340-27NA .. c 06	N82-18075 * #	US-PATENT-CLASS-340-971 .. c 06	N84-27733 * #
US-PATENT-CLASS-340-172.5 .. c 09	N89-24333 * #	US-PATENT-CLASS-340-27R .. c 14	N73-16483 * #	US-PATENT-CLASS-340-975 .. c 06	N84-27733 * #
US-PATENT-CLASS-340-172.5 .. c 08	N71-12502 * #	US-PATENT-CLASS-340-27R .. c 14	N73-20474 * #	US-PATENT-CLASS-340-978 .. c 06	N84-27733 * #
US-PATENT-CLASS-340-172.5 .. c 08	N71-12506 * #	US-PATENT-CLASS-340-27SS .. c 35	N78-14364 * #	US-PATENT-CLASS-340-97 .. c 21	N73-13643 * #
US-PATENT-CLASS-340-172.5 .. c 31	N71-15568 * #	US-PATENT-CLASS-340-271 .. c 35	N77-30436 * #	US-PATENT-CLASS-340-980 .. c 06	N84-27733 * #
US-PATENT-CLASS-340-172.5 .. c 08	N71-19288 * #	US-PATENT-CLASS-340-277 .. c 10	N73-30205 * #	US-PATENT-CLASS-340-988 .. c 35	N84-33769 * #
US-PATENT-CLASS-340-172.5 .. c 08	N71-22707 * #	US-PATENT-CLASS-340-279 .. c 05	N72-16015 * #	US-PATENT-CLASS-343-DIG.2 .. c 07	N73-24176 * #
US-PATENT-CLASS-340-172.5 .. c 07	N71-24624 * #	US-PATENT-CLASS-340-279 .. c 10	N73-30205 * #	US-PATENT-CLASS-343-DIG.2 .. c 33	N74-20860 * #
US-PATENT-CLASS-340-172.5 .. c 08	N71-27255 * #	US-PATENT-CLASS-340-279 .. c 54	N78-32720 * #	US-PATENT-CLASS-343-DIG.2 .. c 37	N86-25791 * #
US-PATENT-CLASS-340-172.5 .. c 07	N72-25172 * #	US-PATENT-CLASS-340-285 .. c 14	N71-25901 * #	US-PATENT-CLASS-343-DIG.3 .. c 09	N72-12136 * #
US-PATENT-CLASS-340-172.5 .. c 08	N72-25207 * #	US-PATENT-CLASS-340-285 .. c 54	N78-32720 * #	US-PATENT-CLASS-343-DIG2 .. c 07	N83-20944 * #
US-PATENT-CLASS-340-172.5 .. c 09	N72-25248 * #	US-PATENT-CLASS-340-309.1 .. c 54	N78-32720 * #	US-PATENT-CLASS-343-100AP .. c 33	N83-36355 * #
US-PATENT-CLASS-340-172.5 .. c 08	N73-13187 * #	US-PATENT-CLASS-340-309.4 .. c 33	N81-14221 * #	US-PATENT-CLASS-343-100CL .. c 32	N77-32342 * #
US-PATENT-CLASS-340-172.5 .. c 08	N73-26176 * #	US-PATENT-CLASS-340-310A .. c 33	N81-14221 * #	US-PATENT-CLASS-343-100CL .. c 32	N79-14268 * #
US-PATENT-CLASS-340-172.5 .. c 60	N76-18800 * #	US-PATENT-CLASS-340-310R .. c 33	N81-14221 * #	US-PATENT-CLASS-343-100CL .. c 32	N81-29308 * #
US-PATENT-CLASS-340-172.5 .. c 60	N76-21914 * #	US-PATENT-CLASS-340-324AD .. c 33	N75-19517 * #	US-PATENT-CLASS-343-100CL .. c 32	N83-18975 * #
US-PATENT-CLASS-340-172.5 .. c 60	N77-12721 * #	US-PATENT-CLASS-340-324A .. c 09	N72-25248 * #	US-PATENT-CLASS-343-100CL .. c 32	N83-19968 * #
US-PATENT-CLASS-340-172.5 .. c 60	N77-14751 * #	US-PATENT-CLASS-340-324R .. c 26	N72-25680 * #	US-PATENT-CLASS-343-100ME .. c 14	N72-28437 * #
US-PATENT-CLASS-340-172.5 .. c 60	N77-19760 * #	US-PATENT-CLASS-340-324 .. c 06	N71-12507 * #	US-PATENT-CLASS-343-100ME .. c 14	N73-26432 * #
US-PATENT-CLASS-340-173.2 .. c 08	N72-21198 * #	US-PATENT-CLASS-340-324 .. c 09	N71-33519 * #	US-PATENT-CLASS-343-100ME .. c 46	N80-14603 * #
US-PATENT-CLASS-340-173CA .. c 33	N75-31331 * #	US-PATENT-CLASS-340-332 .. c 09	N72-25250 * #	US-PATENT-CLASS-343-100ME .. c 35	N80-18359 * #
US-PATENT-CLASS-340-173CR .. c 60	N74-12888 * #	US-PATENT-CLASS-340-336 .. c 09	N71-33519 * #	US-PATENT-CLASS-343-100ME .. c 46	N82-12685 * #
US-PATENT-CLASS-340-173LM .. c 60	N74-12888 * #	US-PATENT-CLASS-340-33 .. c 21	N73-13643 * #	US-PATENT-CLASS-343-100ME .. c 06	N83-10040 * #
US-PATENT-CLASS-340-173LM .. c 60	N78-10709 * #	US-PATENT-CLASS-340-347AD .. c 14	N71-26991 * #	US-PATENT-CLASS-343-100PE .. c 32	N75-24982 * #
US-PATENT-CLASS-340-173LS .. c 08	N72-21198 * #	US-PATENT-CLASS-340-347AD .. c 08	N72-21200 * #	US-PATENT-CLASS-343-100PE .. c 33	N81-26358 * #
US-PATENT-CLASS-340-173LS .. c 36	N75-19652 * #	US-PATENT-CLASS-340-347AD .. c 08	N72-22163 * #	US-PATENT-CLASS-343-100PE .. c 46	N82-12685 * #
US-PATENT-CLASS-340-173 .. c 10	N73-32144 * #	US-PATENT-CLASS-340-347AD .. c 08	N72-2166 * #	US-PATENT-CLASS-343-100PE .. c 35	N82-15381 * #
US-PATENT-CLASS-340-174.1L .. c 35	N74-11283 * #	US-PATENT-CLASS-340-347AD .. c 08	N73-21226 * #	US-PATENT-CLASS-343-100R .. c 10	N73-16206 * #
US-PATENT-CLASS-340-174.1M .. c 36	N74-13205 * #	US-PATENT-CLASS-340-347AD .. c 08	N73-20217 * #	US-PATENT-CLASS-343-100R .. c 33	N80-18287 * #
US-PATENT-CLASS-340-174.1M .. c 35	N78-29421 * #	US-PATENT-CLASS-340-347AD .. c 35	N74-17885 * #	US-PATENT-CLASS-343-100SA .. c 10	N73-16206 * #
US-PATENT-CLASS-340-174.1M .. c 35	N79-16246 * #	US-PATENT-CLASS-340-347AD .. c 35	N74-32877 * #	US-PATENT-CLASS-343-100SA .. c 33	N74-20860 * #
US-PATENT-CLASS-340-174.1R .. c 21	N73-13644 * #	US-PATENT-CLASS-340-347AD .. c 33	N76-18345 * #	US-PATENT-CLASS-343-100SA .. c 17	N76-21250 * #
US-PATENT-CLASS-340-174.1 .. c 08	N71-21042 * #	US-PATENT-CLASS-340-347AD .. c 60	N77-32731 * #	US-PATENT-CLASS-343-100SA .. c 32	N80-28578 * #
US-PATENT-CLASS-340-174.1 .. c 07	N71-23001 * #	US-PATENT-CLASS-340-347CC .. c 31	N86-29055 * #	US-PATENT-CLASS-343-100ST .. c 07	N72-21118 * #
US-PATENT-CLASS-340-174.1 .. c 08	N71-27210 * #	US-PATENT-CLASS-340-347DA .. c 08	N71-27057 * #	US-PATENT-CLASS-343-100ST .. c 33	N74-20860 * #
US-PATENT-CLASS-340-174AG .. c 23	N72-17747 * #	US-PATENT-CLASS-340-347DA .. c 08	N72-20176 * #	US-PATENT-CLASS-343-100ST .. c 32	N75-15854 * #
US-PATENT-CLASS-340-174CS .. c 08	N72-21199 * #	US-PATENT-CLASS-340-347DA .. c 08	N72-25206 * #	US-PATENT-CLASS-343-100ST .. c 17	N76-21250 * #
US-PATENT-CLASS-340-174CT .. c 23	N72-17747 * #	US-PATENT-CLASS-340-347DA .. c 08	N73-32081 * #	US-PATENT-CLASS-343-100ST .. c 32	N77-20289 * #
US-PATENT-CLASS-340-174GA .. c 23	N72-17747 * #	US-PATENT-CLASS-340-347DD .. c 10	N71-33407 * #	US-PATENT-CLASS-343-100ST .. c 33	N80-18287 * #
US-PATENT-CLASS-340-174LC .. c 08	N72-21199 * #	US-PATENT-CLASS-340-347DD .. c 08	N72-18184 * #	US-PATENT-CLASS-343-100TD .. c 32	N79-24210 * #
US-PATENT-CLASS-340-174MA .. c 24	N75-13032 * #	US-PATENT-CLASS-340-347DD .. c 08	N72-20176 * #	US-PATENT-CLASS-343-100TD .. c 32	N81-14185 * #
US-PATENT-CLASS-340-174M .. c 08	N72-21199 * #	US-PATENT-CLASS-340-347DD .. c 08	N72-21197 * #	US-PATENT-CLASS-343-100 .. c 10	N71-18722 * #
US-PATENT-CLASS-340-174SC .. c 23	N72-17747 * #	US-PATENT-CLASS-340-347DD .. c 08	N73-12176 * #	US-PATENT-CLASS-343-100 .. c 07	N71-19854 * #
US-PATENT-CLASS-340-174SY .. c 08	N72-21199 * #	US-PATENT-CLASS-340-347DD .. c 60	N76-23850 * #	US-PATENT-CLASS-343-100 .. c 30	N71-23723 * #
US-PATENT-CLASS-340-174SR .. c 36	N74-13205 * #	US-PATENT-CLASS-340-347DD .. c 32	N77-12239 * #	US-PATENT-CLASS-343-100 .. c 07	N71-24621 * #
US-PATENT-CLASS-340-174YC .. c 35	N78-29421 * #	US-PATENT-CLASS-340-347DD .. c 60	N78-17691 * #	US-PATENT-CLASS-343-100 .. c 09	N71-24804 * #
US-PATENT-CLASS-340-174 .. c 08	N71-12504 * #	US-PATENT-CLASS-340-347DD .. c 60	N79-20751 * #	US-PATENT-CLASS-343-100 .. c 31	N71-24813 * #
US-PATENT-CLASS-340-174 .. c 09	N71-12515 * #	US-PATENT-CLASS-340-347DD .. c 33	N82-26570 * #	US-PATENT-CLASS-343-100 .. c 07	N71-27056 * #
US-PATENT-CLASS-340-174 .. c 08	N71-18595 * #	US-PATENT-CLASS-340-347DD .. c 32	N86-27513 * #	US-PATENT-CLASS-343-100 .. c 07	N71-28900 * #
US-PATENT-CLASS-340-174 .. c 08	N71-18694 * #	US-PATENT-CLASS-340-347P .. c 60	N76-23850 * #	US-PATENT-CLASS-343-105R .. c 32	N75-26194 * #
US-PATENT-CLASS-340-174 .. c 10	N71-23033 * #	US-PATENT-CLASS-340-347P .. c 35	N77-30436 * #	US-PATENT-CLASS-343-105R .. c 04	N84-27713 * #
US-PATENT-CLASS-340-174 .. c 10	N71-26418 * #	US-PATENT-CLASS-340-347R .. c 08	N72-22165 * #	US-PATENT-CLASS-343-108R .. c 04	N74-13420 * #
US-PATENT-CLASS-340-174 .. c 10	N71-26434 * #	US-PATENT-CLASS-340-347SH .. c 33	N77-31404 * #	US-PATENT-CLASS-343-10 .. c 32	N77-32342 * #
US-PATENT-CLASS-340-174 .. c 08	N71-28925 * #	US-PATENT-CLASS-340-347SY .. c 62	N76-31946 * #	US-PATENT-CLASS-343-11R .. c 09	N73-12211 * #
US-PATENT-CLASS-340-174 .. c 10	N71-29135 * #	US-PATENT-CLASS-340-347SY .. c 35	N77-30436 * #	US-PATENT-CLASS-343-11VB .. c 09	N73-12211 * #
US-PATENT-CLASS-340-177VA .. c 06	N80-18036 * #	US-PATENT-CLASS-340-347SY .. c 31	N86-29055 * #	US-PATENT-CLASS-343-112CA .. c 21	N73-13643 * #
US-PATENT-CLASS-340-177 .. c 09	N72-17153 * #	US-PATENT-CLASS-340-347 .. c 08	N70-35423 * #	US-PATENT-CLASS-343-112CA .. c 21	N73-30641 * #
US-PATENT-CLASS-340-182 .. c 33	N74-27862 * #	US-PATENT-CLASS-340-347 .. c 08	N70-40125 * #	US-PATENT-CLASS-343-112CA .. c 03	N75-30132 * #
US-PATENT-CLASS-340-183 .. c 52	N74-26625 * #	US-PATENT-CLASS-340-347 .. c 08	N71-12501 * #	US-PATENT-CLASS-343-112D .. c 14	N72-28437 * #
US-PATENT-CLASS-340-189M .. c 17	N76-29347 * #	US-PATENT-CLASS-340-347 .. c 08	N71-18594 * #	US-PATENT-CLASS-343-112D .. c 32	N75-26194 * #
US-PATENT-CLASS-340-198 .. c 14	N70-33179 * #	US-PATENT-CLASS-340-347 .. c 08	N71-19435 * #	US-PATENT-CLASS-343-112D .. c 46	N80-14603 * #
US-PATENT-CLASS-340-198 .. c 07	N71-11298 * #	US-PATENT-CLASS-340-347 .. c 08	N71-19544 * #	US-PATENT-CLASS-343-112R .. c 09	N73-32110 * #
US-PATENT-CLASS-340-200 .. c 33	N74-27862 * #	US-PATENT-CLASS-340-347 .. c 08	N71-19687 * #	US-PATENT-CLASS-343-112R .. c 17	N78-17140 * #
US-PATENT-CLASS-340-200 .. c 33	N77-31404 * #	US-PATENT-CLASS-340-347 .. c 08	N71-24650 * #	US-PATENT-CLASS-343-112R .. c 04	N80-32359 * #
US-PATENT-CLASS-340-203 .. c 09	N72-22202 * #	US-PATENT-CLASS-340-347 .. c 10	N71-25917 * #	US-PATENT-CLASS-343-112R .. c 32	N81-27341 * #
US-PATENT-CLASS-340-203 .. c 52	N74-26625 * #	US-PATENT-CLASS-340-347 .. c 10	N71-26544 * #	US-PATENT-CLASS-343-112TC .. c 17	N76-21250 * #
US-PATENT-CLASS-340-206 .. c 17	N76-29347 * #	US-PATENT-CLASS-340-347 .. c 08	N73-28045 * #	US-PATENT-CLASS-343-112 .. c 21	N71-13958 * #
US-PATENT-CLASS-340-207P .. c 17	N76-22245 * #	US-PATENT-CLASS-340-348 .. c 08	N72-22167 * #	US-PATENT-CLASS-343-112 .. c 02	N71-19287 * #
US-PATENT-CLASS-340-207R .. c 52	N74-26625 * #	US-PATENT-CLASS-340-38P .. c 66	N76-19888 * #	US-PATENT-CLASS-343-112 .. c 21	N71-24948 * #
US-PATENT-CLASS-340-207 .. c 07	N73-25160 * #	US-PATENT-CLASS-340-403 .. c 10	N71-27272 * #	US-PATENT-CLASS-343-113R .. c 09	N73-32110 * #
US-PATENT-CLASS-340-210 .. c 03	N72-20031 * #	US-PATENT-CLASS-340-407 .. c 71	N74-21014 * #	US-PATENT-CLASS-343-113R .. c 44	N78-28594 * #
US-PATENT-CLASS-340-213.1 .. c 10	N71-19417 * #	US-PATENT-CLASS-340-412 .. c 10	N74-24798 * #	US-PATENT-CLASS-343-113 .. c 10	N71-21473 * #
US-PATENT-CLASS-340-213R .. c 54	N78-32720 * #	US-PATENT-CLASS-340-415 .. c 10	N73-32144 * #	US-PATENT-CLASS-343-113 .. c 07	N71-24625 * #
US-PATENT-CLASS-340-213 .. c 10	N71-27272 * #	US-PATENT-CLASS-340-418 .. c 14	N73-16484 * #	US-PATENT-CLASS-343-117R .. c 32	N79-13214 * #
US-PATENT-CLASS-340-223 .. c 10	N73-32144 * #	US-PATENT-CLASS-340-5C .. c 14	N73-27379 * #	US-PATENT-CLASS-343-117 .. c 07	N71-27056 * #
US-PATENT-CLASS-340-224 .. c 37	N77-19458 * #	US-PATENT-CLASS-340-5H .. c 32	N77-21267 * #	US-PATENT-CLASS-343-118 .. c 32	N79-13214 * #
US-PATENT-CLASS-340-227R .. c 14	N72-25412 * #	US-PATENT-CLASS-340-5H .. c 35	N74-16135 * #	US-PATENT-CLASS-343-119 .. c 44	N78-28594 * #
US-PATENT-CLASS-340-227 .. c 10	N71-16058 * #	US-PATENT-CLASS-340-515 .. c 35	N83-34272 * #	US-PATENT-CLASS-343-12R .. c 08	N72-25209 * #
US-PATENT-CLASS-340-227 .. c 14	N71-27186 * #	US-PATENT-CLASS-340-558 .. c 74	N85-22139 * #	US-PATENT-CLASS-343-12 .. c 21	N70-41930 * #
US-PATENT-CLASS-340-228.2 .. c 10	N72-17173 * #	US-PATENT-CLASS-340-566 .. c 35	N83-34272 * #	US-PATENT-CLASS-343-12 .. c 10	N72-20224 * #
US-PATENT-CLASS-340-228S .. c 14	N73-16484 * #	US-PATENT-CLASS-340-57 .. c 14	N71-15620 * #	US-PATENT-CLASS-343-13R .. c 74	N85-34629 * #
US-PATENT-CLASS-340-233 .. c 14	N71-25901 * #	US-PATENT-CLASS-340-602 .. c 33	N80-23559 * #	US-PATENT-CLASS-343-13 .. c 09	N71-18598 * #
		US-PATENT-CLASS-340-604 .. c 33	N80-23559 * #	US-PATENT-CLASS-343-14 .. c 07	N70-41680 * #

US-PATENT-CLASS-343-14	c 08	N72-25209 *	#	US-PATENT-CLASS-343-7.4	c 32	N79-13214 *	#	US-PATENT-CLASS-343-830	c 32	N80-32604 *	#
US-PATENT-CLASS-343-14	c 14	N73-25461 *	#	US-PATENT-CLASS-343-7.5	c 07	N69-39974 *	#	US-PATENT-CLASS-343-833	c 31	N70-34135 *	#
US-PATENT-CLASS-343-14	c 32	N79-14267 *	#	US-PATENT-CLASS-343-7.5	c 09	N71-24595 *	#	US-PATENT-CLASS-343-837	c 07	N72-32169 *	#
US-PATENT-CLASS-343-14	c 31	N79-28370 *	#	US-PATENT-CLASS-343-7.5	c 07	N72-11149 *	#	US-PATENT-CLASS-343-837	c 07	N73-14130 *	#
US-PATENT-CLASS-343-16M	c 10	N72-22235 *	#	US-PATENT-CLASS-343-7.5	c 44	N74-19870 *	#	US-PATENT-CLASS-343-837	c 33	N75-19516 *	#
US-PATENT-CLASS-343-16M	c 44	N78-28594 *	#	US-PATENT-CLASS-343-7.5	c 32	N82-23376 *	#	US-PATENT-CLASS-343-837	c 32	N76-15329 *	#
US-PATENT-CLASS-343-16	c 09	N71-20864 *	#	US-PATENT-CLASS-343-700MS	c 32	N78-24391 *	#	US-PATENT-CLASS-343-837	c 32	N76-18295 *	#
US-PATENT-CLASS-343-16	c 10	N71-21483 *	#	US-PATENT-CLASS-343-700MS	c 32	N80-32604 *	#	US-PATENT-CLASS-343-837	c 32	N78-31321 *	#
US-PATENT-CLASS-343-17.1PF	c 32	N82-23376 *	#	US-PATENT-CLASS-343-700MS	c 32	N82-11336 *	#	US-PATENT-CLASS-343-839	c 09	N73-19234 *	#
US-PATENT-CLASS-343-17.2-PC	c 32	N85-34327 *	#	US-PATENT-CLASS-343-703	c 09	N71-13521 *	#	US-PATENT-CLASS-343-840	c 07	N71-27233 *	#
US-PATENT-CLASS-343-17.2PC	c 35	N79-10391 *	#	US-PATENT-CLASS-343-703	c 07	N71-24614 *	#	US-PATENT-CLASS-343-840	c 09	N72-12136 *	#
US-PATENT-CLASS-343-17.2	c 07	N70-36911 *	#	US-PATENT-CLASS-343-705	c 07	N70-38200 *	#	US-PATENT-CLASS-343-840	c 07	N72-32169 *	#
US-PATENT-CLASS-343-17.5	c 14	N73-25461 *	#	US-PATENT-CLASS-343-705	c 07	N70-40202 *	#	US-PATENT-CLASS-343-840	c 32	N76-18295 *	#
US-PATENT-CLASS-343-17.5	c 32	N75-15854 *	#	US-PATENT-CLASS-343-705	c 31	N71-10747 *	#	US-PATENT-CLASS-343-840	c 33	N83-36355 *	#
US-PATENT-CLASS-343-17.5	c 32	N84-22820 *	#	US-PATENT-CLASS-343-705	c 03	N76-32140 *	#	US-PATENT-CLASS-343-844	c 32	N79-11264 *	#
US-PATENT-CLASS-343-17.7	c 07	N71-12391 *	#	US-PATENT-CLASS-343-706	c 07	N72-21117 *	#	US-PATENT-CLASS-343-844	c 32	N80-28578 *	#
US-PATENT-CLASS-343-17.7	c 44	N74-19870 *	#	US-PATENT-CLASS-343-708	c 09	N71-22888 *	#	US-PATENT-CLASS-343-846	c 33	N76-14372 *	#
US-PATENT-CLASS-343-17.7	c 32	N77-31350 *	#	US-PATENT-CLASS-343-708	c 07	N71-22984 *	#	US-PATENT-CLASS-343-846	c 32	N82-11336 *	#
US-PATENT-CLASS-343-17.7	c 32	N79-11265 *	#	US-PATENT-CLASS-343-708	c 07	N71-28980 *	#	US-PATENT-CLASS-343-853	c 07	N72-11148 *	#
US-PATENT-CLASS-343-17.7	c 32	N84-27951 *	#	US-PATENT-CLASS-343-708	c 09	N72-25247 *	#	US-PATENT-CLASS-343-853	c 07	N72-21227 *	#
US-PATENT-CLASS-343-17.7	c 33	N85-21493 *	#	US-PATENT-CLASS-343-708	c 32	N74-20864 *	#	US-PATENT-CLASS-343-853	c 07	N72-25174 *	#
US-PATENT-CLASS-343-176	c 07	N71-27056 *	#	US-PATENT-CLASS-343-708	c 32	N82-11336 *	#	US-PATENT-CLASS-343-853	c 09	N72-31235 *	#
US-PATENT-CLASS-343-176	c 32	N76-14321 *	#	US-PATENT-CLASS-343-718	c 09	N71-18720 *	#	US-PATENT-CLASS-343-853	c 10	N73-16206 *	#
US-PATENT-CLASS-343-179	c 07	N72-11149 *	#	US-PATENT-CLASS-343-720	c 09	N72-12136 *	#	US-PATENT-CLASS-343-853	c 32	N74-20863 *	#
US-PATENT-CLASS-343-179	c 07	N73-20174 *	#	US-PATENT-CLASS-343-725	c 07	N73-28013 *	#	US-PATENT-CLASS-343-853	c 32	N74-20864 *	#
US-PATENT-CLASS-343-179	c 32	N78-15323 *	#	US-PATENT-CLASS-343-727	c 32	N81-14187 *	#	US-PATENT-CLASS-343-854	c 07	N69-27460 *	#
US-PATENT-CLASS-343-179	c 32	N79-20296 *	#	US-PATENT-CLASS-343-727	c 32	N82-11336 *	#	US-PATENT-CLASS-343-854	c 07	N71-27233 *	#
US-PATENT-CLASS-343-18A	c 32	N80-14281 *	#	US-PATENT-CLASS-343-729	c 07	N73-28013 *	#	US-PATENT-CLASS-343-854	c 09	N73-19234 *	#
US-PATENT-CLASS-343-18B	c 32	N74-12912 *	#	US-PATENT-CLASS-343-730	c 32	N74-20863 *	#	US-PATENT-CLASS-343-854	c 33	N74-20860 *	#
US-PATENT-CLASS-343-18B	c 32	N77-21267 *	#	US-PATENT-CLASS-343-754	c 09	N73-19234 *	#	US-PATENT-CLASS-343-854	c 33	N76-27472 *	#
US-PATENT-CLASS-343-18B	c 43	N80-18498 *	#	US-PATENT-CLASS-343-755	c 33	N76-27472 *	#	US-PATENT-CLASS-343-854	c 32	N79-11264 *	#
US-PATENT-CLASS-343-18D	c 43	N80-18498 *	#	US-PATENT-CLASS-343-755	c 32	N81-25278 *	#	US-PATENT-CLASS-343-854	c 32	N80-28578 *	#
US-PATENT-CLASS-343-18	c 31	N70-37981 *	#	US-PATENT-CLASS-343-761	c 33	N75-19516 *	#	US-PATENT-CLASS-343-872	c 07	N71-28980 *	#
US-PATENT-CLASS-343-18	c 07	N70-40063 *	#	US-PATENT-CLASS-343-761	c 32	N76-21365 *	#	US-PATENT-CLASS-343-872	c 07	N71-19493 *	#
US-PATENT-CLASS-343-18	c 30	N70-40309 *	#	US-PATENT-CLASS-343-762	c 07	N72-25174 *	#	US-PATENT-CLASS-343-873	c 09	N72-25247 *	#
US-PATENT-CLASS-343-18	c 07	N70-41678 *	#	US-PATENT-CLASS-343-768	c 10	N71-26142 *	#	US-PATENT-CLASS-343-876	c 32	N76-15329 *	#
US-PATENT-CLASS-343-200	c 07	N73-16121 *	#	US-PATENT-CLASS-343-769	c 32	N74-20864 *	#	US-PATENT-CLASS-343-876	c 32	N85-29118 *	#
US-PATENT-CLASS-343-204	c 07	N73-26118 *	#	US-PATENT-CLASS-343-770	c 09	N72-31235 *	#	US-PATENT-CLASS-343-880	c 07	N73-26117 *	#
US-PATENT-CLASS-343-225	c 17	N78-17140 *	#	US-PATENT-CLASS-343-770	c 33	N76-14372 *	#	US-PATENT-CLASS-343-880	c 18	N80-14183 *	#
US-PATENT-CLASS-343-352	c 43	N85-21723 *	#	US-PATENT-CLASS-343-771	c 07	N71-28809 *	#	US-PATENT-CLASS-343-882	c 33	N76-32457 *	#
US-PATENT-CLASS-343-352	c 46	N85-21846 *	#	US-PATENT-CLASS-343-771	c 07	N72-11148 *	#	US-PATENT-CLASS-343-882	c 37	N86-25789 *	#
US-PATENT-CLASS-343-356	c 04	N84-22546 *	#	US-PATENT-CLASS-343-771	c 09	N72-21244 *	#	US-PATENT-CLASS-343-883	c 07	N73-26117 *	#
US-PATENT-CLASS-343-357	c 04	N84-22546 *	#	US-PATENT-CLASS-343-771	c 07	N72-22127 *	#	US-PATENT-CLASS-343-883	c 18	N80-14183 *	#
US-PATENT-CLASS-343-357	c 04	N86-27270 *	#	US-PATENT-CLASS-343-771	c 09	N72-25247 *	#	US-PATENT-CLASS-343-883	c 37	N86-25791 *	#
US-PATENT-CLASS-343-376	c 33	N85-21493 *	#	US-PATENT-CLASS-343-771	c 09	N72-31235 *	#	US-PATENT-CLASS-343-884	c 07	N71-27191 *	#
US-PATENT-CLASS-343-418	c 04	N86-27270 *	#	US-PATENT-CLASS-343-772	c 07	N72-20141 *	#	US-PATENT-CLASS-343-884	c 07	N73-26117 *	#
US-PATENT-CLASS-343-460	c 46	N85-21846 *	#	US-PATENT-CLASS-343-772	c 32	N81-25278 *	#	US-PATENT-CLASS-343-893	c 09	N72-21244 *	#
US-PATENT-CLASS-343-5-CD	c 43	N86-19711 *	#	US-PATENT-CLASS-343-773	c 07	N72-20141 *	#	US-PATENT-CLASS-343-893	c 07	N73-28013 *	#
US-PATENT-CLASS-343-5-CM	c 32	N84-34651 *	#	US-PATENT-CLASS-343-776	c 07	N71-12396 *	#	US-PATENT-CLASS-343-895	c 09	N73-19234 *	#
US-PATENT-CLASS-343-5-CM	c 32	N85-34327 *	#	US-PATENT-CLASS-343-777	c 07	N71-27233 *	#	US-PATENT-CLASS-343-895	c 07	N73-26117 *	#
US-PATENT-CLASS-343-5-CM	c 43	N86-19711 *	#	US-PATENT-CLASS-343-777	c 07	N72-25174 *	#	US-PATENT-CLASS-343-895	c 32	N80-23524 *	#
US-PATENT-CLASS-343-5-DP	c 32	N84-34651 *	#	US-PATENT-CLASS-343-779	c 07	N71-11285 *	#	US-PATENT-CLASS-343-895	c 32	N82-27558 *	#
US-PATENT-CLASS-343-5-FT	c 32	N84-34651 *	#	US-PATENT-CLASS-343-779	c 10	N72-22235 *	#	US-PATENT-CLASS-343-9PS	c 32	N83-19968 *	#
US-PATENT-CLASS-343-5-VQ	c 43	N86-19711 *	#	US-PATENT-CLASS-343-779	c 07	N72-25174 *	#	US-PATENT-CLASS-343-9PS	c 32	N83-31918 *	#
US-PATENT-CLASS-343-5-W	c 32	N85-34327 *	#	US-PATENT-CLASS-343-779	c 32	N76-15329 *	#	US-PATENT-CLASS-343-9R	c 32	N84-22820 *	#
US-PATENT-CLASS-343-5CM	c 07	N72-21118 *	#	US-PATENT-CLASS-343-779	c 33	N76-27472 *	#	US-PATENT-CLASS-343-909	c 32	N74-11000 *	#
US-PATENT-CLASS-343-5CM	c 32	N77-21267 *	#	US-PATENT-CLASS-343-781CA	c 32	N78-31321 *	#	US-PATENT-CLASS-343-909	c 35	N76-15435 *	#
US-PATENT-CLASS-343-5CM	c 32	N77-32342 *	#	US-PATENT-CLASS-343-781P	c 46	N82-12685 *	#	US-PATENT-CLASS-343-909	c 33	N79-28416 *	#
US-PATENT-CLASS-343-5CM	c 35	N79-10391 *	#	US-PATENT-CLASS-343-781R	c 32	N81-25278 *	#	US-PATENT-CLASS-343-909	c 32	N80-14281 *	#
US-PATENT-CLASS-343-5CM	c 32	N79-14268 *	#	US-PATENT-CLASS-343-781	c 09	N70-35219 *	#	US-PATENT-CLASS-343-912	c 07	N72-21117 *	#
US-PATENT-CLASS-343-5CM	c 43	N80-18498 *	#	US-PATENT-CLASS-343-781	c 09	N70-35382 *	#	US-PATENT-CLASS-343-912	c 07	N72-21227 *	#
US-PATENT-CLASS-343-5CM	c 32	N82-12297 *	#	US-PATENT-CLASS-343-781	c 09	N70-35425 *	#	US-PATENT-CLASS-343-912	c 32	N76-18295 *	#
US-PATENT-CLASS-343-5CM	c 32	N83-18975 *	#	US-PATENT-CLASS-343-781	c 07	N72-32169 *	#	US-PATENT-CLASS-343-915	c 31	N71-16102 *	#
US-PATENT-CLASS-343-5CM	c 32	N83-19968 *	#	US-PATENT-CLASS-343-781	c 32	N74-11000 *	#	US-PATENT-CLASS-343-915	c 09	N71-20658 *	#
US-PATENT-CLASS-343-5CM	c 32	N83-31918 *	#	US-PATENT-CLASS-343-781	c 33	N75-19516 *	#	US-PATENT-CLASS-343-915	c 07	N72-32169 *	#
US-PATENT-CLASS-343-5DP	c 07	N72-11149 *	#	US-PATENT-CLASS-343-781	c 32	N76-21365 *	#	US-PATENT-CLASS-343-915	c 07	N73-14130 *	#
US-PATENT-CLASS-343-5DP	c 09	N73-12211 *	#	US-PATENT-CLASS-343-782	c 07	N73-14130 *	#	US-PATENT-CLASS-343-915	c 07	N73-24176 *	#
US-PATENT-CLASS-343-5DP	c 32	N77-32342 *	#	US-PATENT-CLASS-343-782	c 32	N78-31321 *	#	US-PATENT-CLASS-343-915	c 32	N76-18295 *	#
US-PATENT-CLASS-343-5DP	c 32	N82-23376 *	#	US-PATENT-CLASS-343-784	c 07	N71-28980 *	#	US-PATENT-CLASS-343-915	c 33	N76-32457 *	#
US-PATENT-CLASS-343-5GC	c 32	N75-24982 *	#	US-PATENT-CLASS-343-786	c 07	N71-15907 *	#	US-PATENT-CLASS-343-9	c 32	N75-15854 *	#
US-PATENT-CLASS-343-5MM	c 32	N77-21267 *	#	US-PATENT-CLASS-343-786	c 07	N71-22750 *	#	US-PATENT-CLASS-343-9	c 32	N79-10264 *	#
US-PATENT-CLASS-343-5NA	c 31	N79-28370 *	#	US-PATENT-CLASS-343-786	c 07	N71-26101 *	#	US-PATENT-CLASS-346-107A	c 14	N72-18411 *	#
US-PATENT-CLASS-343-5W	c 35	N79-10391 *	#	US-PATENT-CLASS-343-786	c 07	N71-27233 *	#	US-PATENT-CLASS-346-107	c 23	N71-23976 *	#
US-PATENT-CLASS-343-5W	c 43	N80-18498 *	#	US-PATENT-CLASS-343-786	c 07	N72-20141 *	#	US-PATENT-CLASS-346-108	c 35	N74-15831 *	#
US-PATENT-CLASS-343-5W	c 46	N85-21846 *	#	US-PATENT-CLASS-343-786	c 10	N72-22235 *	#	US-PATENT-CLASS-346-110	c 14	N73-32322 *	#
US-PATENT-CLASS-343-6BR	c 32	N77-20289 *	#	US-PATENT-CLASS-343-786	c 07	N72-25174 *	#	US-PATENT-CLASS-346-138	c 21	N73-13644 *	#
US-PATENT-CLASS-343-6.5R	c 07	N72-12080 *	#	US-PATENT-CLASS-343-786	c 09	N72-31235 *	#	US-PATENT-CLASS-346-138	c 35	N74-15831 *	#
US-PATENT-CLASS-343-6.5R	c 07	N72-21118 *	#	US-PATENT-CLASS-343-786	c 32	N74-20863 *	#	US-PATENT-CLASS-346-1	c 12	N71-20815 *	#
US-PATENT-CLASS-343-6.5R	c 07	N72-25171 *	#	US-PATENT-CLASS-343-786	c 32	N76-15330 *	#	US-PATENT-CLASS-346-1	c 09	N72-21246 *	#
US-PATENT-CLASS-343-6.5R	c 08	N72-25209 *	#	US-PATENT-CLASS-343-786	c 32	N76-21365 *	#	US-PATENT-CLASS-346-23	c 14	N72-18411 *	#
US-PATENT-CLASS-343-6.5R	c 07	N73-25161 *	#	US-PATENT-CLASS-343-786	c 32	N80-23524 *	#	US-PATENT-CLASS-346-24	c 35	N74-15831 *	#
US-PATENT-CLASS-343-6.5R	c 21	N73-30641 *	#	US-PATENT-CLASS-343-786	c 32	N80-29539 *	#	US-PATENT-CLASS-346-29	c 09	N72-21246 *	#
US-PATENT-CLASS-343-6.5R	c 32	N74-12912 *	#	US-PATENT-CLASS-343-786	c 32	N81-25278 *	#	US-PATENT-CLASS-346-33R	c 35	N74-32877 *	#
US-PATENT-CLASS-343-6.5R	c 32	N75-15854 *	#	US-PATENT-CLASS-343-789	c 32	N81-14187 *	#	US-PATENT-CLASS-346-44	c 09	N69-21467 *	#
US-PATENT-CLASS-343-6.5R	c 03	N75-30132 *	#	US-PATENT-CLASS-343-789	c 32	N82-27558 *	#	US-PATENT-CLASS-346-50	c 14	N71-21006 *	#
US-PATENT-CLASS-343-6.5R	c 32	N77-20289 *	#	US-PATENT-CLASS-343-795	c 32	N82-11336 *	#	US-PATENT-CLASS-346-74MD	c 21	N73-13644 *	#
US-PATENT-CLASS-343-6.5SS	c 32	N74-12912 *	#	US-PATENT-CLASS-343-797	c 09	N71-24842 *	#	US-PATENT-CLASS-346-74MT	c 35	N79-16246 *	#
US-PATENT-CLASS-343-6.5	c 21										



US-PATENT-CLASS-35-12N	c 09	N78-24280 *	#	US-PATENT-CLASS-350-286	c 74	N83-10900 *	#	US-PATENT-CLASS-350-6	c 32	N80-24510 *	#
US-PATENT-CLASS-35-12N	c 09	N78-18083 *	#	US-PATENT-CLASS-350-287	c 15	N72-11386 *	#	US-PATENT-CLASS-350-619	c 74	N85-23396 *	#
US-PATENT-CLASS-35-12N	c 74	N79-13855 *	#	US-PATENT-CLASS-350-287	c 74	N83-13978 *	#	US-PATENT-CLASS-350-6	c 14	N69-27461 *	#
US-PATENT-CLASS-35-12	c 11	N70-34815 *	#	US-PATENT-CLASS-350-288	c 23	N71-29123 *	#	US-PATENT-CLASS-350-6	c 36	N74-15145 *	#
US-PATENT-CLASS-35-12	c 31	N70-34968 *	#	US-PATENT-CLASS-350-288	c 12	N76-15189 *	#	US-PATENT-CLASS-350-79	c 14	N72-32452 *	#
US-PATENT-CLASS-35-12	c 11	N71-10748 *	#	US-PATENT-CLASS-350-288	c 74	N77-28933 *	#	US-PATENT-CLASS-350-7	c 74	N74-15095 *	#
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US-PATENT-CLASS-35-12	c 11	N71-10776 *	#	US-PATENT-CLASS-350-288	c 44	N79-24433 *	#	US-PATENT-CLASS-350-96.10	c 74	N84-11921 *	#
US-PATENT-CLASS-35-12	c 11	N71-18773 *	#	US-PATENT-CLASS-350-292	c 35	N75-12273 *	#	US-PATENT-CLASS-350-96.15	c 74	N84-11921 *	#
US-PATENT-CLASS-35-12	c 11	N71-19494 *	#	US-PATENT-CLASS-350-292	c 44	N79-14529 *	#	US-PATENT-CLASS-350-96.15	c 74	N85-29749 *	#
US-PATENT-CLASS-35-12	c 11	N71-21474 *	#	US-PATENT-CLASS-350-292	c 44	N79-24432 *	#	US-PATENT-CLASS-350-96.16	c 74	N83-29032 *	#
US-PATENT-CLASS-35-12	c 18	N78-14186 *	#	US-PATENT-CLASS-350-293	c 16	N73-16536 *	#	US-PATENT-CLASS-350-96.25	c 33	N81-29342 *	#
US-PATENT-CLASS-35-17	c 05	N71-24806 *	#	US-PATENT-CLASS-350-293	c 12	N76-15189 *	#	US-PATENT-CLASS-350-96R	c 60	N77-14751 *	#
US-PATENT-CLASS-35-19	c 10	N71-27365 *	#	US-PATENT-CLASS-350-293	c 44	N76-24696 *	#	US-PATENT-CLASS-350-96R	c 60	N77-32731 *	#
US-PATENT-CLASS-35-22R	c 05	N73-13114 *	#	US-PATENT-CLASS-350-293	c 44	N78-10554 *	#	US-PATENT-CLASS-350-96R	c 60	N78-10709 *	#
US-PATENT-CLASS-35-29	c 11	N71-16028 *	#	US-PATENT-CLASS-350-293	c 44	N79-14529 *	#	US-PATENT-CLASS-350-96WG	c 36	N75-31427 *	#
US-PATENT-CLASS-35-29	c 05	N71-28619 *	#	US-PATENT-CLASS-350-294	c 89	N79-10969 *	#	US-PATENT-CLASS-350-96WG	c 36	N76-18428 *	#
US-PATENT-CLASS-35-35A	c 71	N74-21014 *	#	US-PATENT-CLASS-350-294	c 44	N79-24432 *	#	US-PATENT-CLASS-350-96WG	c 36	N76-24553 *	#
US-PATENT-CLASS-35-45	c 14	N70-35394 *	#	US-PATENT-CLASS-350-294	c 32	N80-24510 *	#	US-PATENT-CLASS-350-96	c 07	N71-26291 *	#
US-PATENT-CLASS-35-49	c 12	N69-39988 *	#	US-PATENT-CLASS-350-295	c 44	N77-32583 *	#	US-PATENT-CLASS-351-166	c 74	N78-32854 *	#
US-PATENT-CLASS-35-8	c 05	N72-16015 *	#	US-PATENT-CLASS-350-295	c 44	N80-14473 *	#	US-PATENT-CLASS-351-23	c 05	N73-26072 *	#
US-PATENT-CLASS-350-100	c 36	N77-25501 *	#	US-PATENT-CLASS-350-295	c 44	N79-24432 *	#	US-PATENT-CLASS-351-23	c 52	N76-30793 *	#
US-PATENT-CLASS-350-102	c 23	N71-29123 *	#	US-PATENT-CLASS-350-296	c 44	N80-14473 *	#	US-PATENT-CLASS-351-30	c 05	N73-26072 *	#
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US-PATENT-CLASS-350-138	c 23	N72-27728 *	#	US-PATENT-CLASS-350-299	c 44	N76-24696 *	#	US-PATENT-CLASS-351-36	c 05	N73-26072 *	#
US-PATENT-CLASS-350-145	c 74	N77-20882 *	#	US-PATENT-CLASS-350-299	c 74	N77-28932 *	#	US-PATENT-CLASS-351-36	c 52	N76-30793 *	#
US-PATENT-CLASS-350-147	c 14	N72-27409 *	#	US-PATENT-CLASS-350-299	c 44	N78-10554 *	#	US-PATENT-CLASS-351-38	c 54	N75-27759 *	#
US-PATENT-CLASS-350-150	c 26	N72-25680 *	#	US-PATENT-CLASS-350-299	c 44	N78-10554 *	#	US-PATENT-CLASS-352-169	c 14	N73-14427 *	#
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US-PATENT-CLASS-350-151	c 36	N74-13205 *	#	US-PATENT-CLASS-350-299	c 44	N79-24432 *	#	US-PATENT-CLASS-352-84	c 16	N71-33410 *	#
US-PATENT-CLASS-350-151	c 35	N78-29421 *	#	US-PATENT-CLASS-350-299	c 36	N84-14509 *	#	US-PATENT-CLASS-352-84	c 14	N72-18411 *	#
US-PATENT-CLASS-350-157	c 74	N79-14891 *	#	US-PATENT-CLASS-350-2	c 23	N71-30027 *	#	US-PATENT-CLASS-352-84	c 34	N74-23066 *	#
US-PATENT-CLASS-350-159	c 74	N78-17865 *	#	US-PATENT-CLASS-350-3.5	c 16	N71-15551 *	#	US-PATENT-CLASS-352-84	c 34	N74-23066 *	#
US-PATENT-CLASS-350-160R	c 14	N72-25410 *	#	US-PATENT-CLASS-350-3.5	c 16	N71-15555 *	#	US-PATENT-CLASS-352-84	c 74	N81-17886 *	#
US-PATENT-CLASS-350-160R	c 26	N72-25680 *	#	US-PATENT-CLASS-350-3.5	c 16	N71-15567 *	#	US-PATENT-CLASS-352-84	c 35	N82-26628 *	#
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US-PATENT-CLASS-350-161	c 26	N72-27784 *	#	US-PATENT-CLASS-350-3.5	c 16	N71-29131 *	#	US-PATENT-CLASS-352-84	c 70	N74-21300 *	#
US-PATENT-CLASS-350-161	c 36	N75-31427 *	#	US-PATENT-CLASS-350-3.5	c 14	N72-17324 *	#	US-PATENT-CLASS-352-84	c 35	N82-26628 *	#
US-PATENT-CLASS-350-162R	c 74	N80-21140 *	#	US-PATENT-CLASS-350-3.5	c 16	N73-30476 *	#	US-PATENT-CLASS-352-84	c 74	N86-28732 *	#
US-PATENT-CLASS-350-162SF	c 23	N73-30666 *	#	US-PATENT-CLASS-350-3.5	c 35	N74-15146 *	#	US-PATENT-CLASS-352-84	c 74	N79-20856 *	#
US-PATENT-CLASS-350-162SF	c 74	N76-31998 *	#	US-PATENT-CLASS-350-3.5	c 35	N74-17153 *	#	US-PATENT-CLASS-352-84	c 14	N73-33361 *	#
US-PATENT-CLASS-350-162SF	c 74	N77-28932 *	#	US-PATENT-CLASS-350-3.5	c 35	N74-26946 *	#	US-PATENT-CLASS-352-84	c 14	N71-28994 *	#
US-PATENT-CLASS-350-162SF	c 36	N77-32478 *	#	US-PATENT-CLASS-350-3.5	c 35	N75-25124 *	#	US-PATENT-CLASS-352-84	c 36	N75-15028 *	#
US-PATENT-CLASS-350-162	c 14	N72-17323 *	#	US-PATENT-CLASS-350-3.5	c 35	N75-27328 *	#	US-PATENT-CLASS-352-84	c 74	N78-13874 *	#
US-PATENT-CLASS-350-165	c 27	N78-31233 *	#	US-PATENT-CLASS-350-3.5	c 35	N76-18402 *	#	US-PATENT-CLASS-352-84	c 16	N71-24074 *	#
US-PATENT-CLASS-350-166	c 44	N83-34448 *	#	US-PATENT-CLASS-350-3.5	c 35	N78-17357 *	#	US-PATENT-CLASS-352-84	c 74	N78-13874 *	#
US-PATENT-CLASS-350-168	c 74	N85-23396 *	#	US-PATENT-CLASS-350-3.5	c 38	N78-32447 *	#	US-PATENT-CLASS-352-84	c 36	N75-19653 *	#
US-PATENT-CLASS-350-16	c 14	N72-22444 *	#	US-PATENT-CLASS-350-30	c 74	N81-17886 *	#	US-PATENT-CLASS-352-84	c 72	N74-19310 *	#
US-PATENT-CLASS-350-170	c 73	N78-32848 *	#	US-PATENT-CLASS-350-30	c 11	N69-24321 *	#	US-PATENT-CLASS-352-84	c 36	N76-14447 *	#
US-PATENT-CLASS-350-170	c 74	N83-10900 *	#	US-PATENT-CLASS-350-30	c 23	N71-24868 *	#	US-PATENT-CLASS-352-84	c 35	N77-10493 *	#
US-PATENT-CLASS-350-171	c 23	N72-23695 *	#	US-PATENT-CLASS-350-30	c 23	N71-29123 *	#	US-PATENT-CLASS-352-84	c 47	N77-10753 *	#
US-PATENT-CLASS-350-171	c 74	N83-17305 *	#	US-PATENT-CLASS-350-30	c 23	N71-33229 *	#	US-PATENT-CLASS-352-84	c 23	N73-13661 *	#
US-PATENT-CLASS-350-172	c 74	N84-23248 *	#	US-PATENT-CLASS-350-30	c 23	N72-22673 *	#	US-PATENT-CLASS-352-84	c 35	N76-31490 *	#
US-PATENT-CLASS-350-173	c 73	N78-32848 *	#	US-PATENT-CLASS-350-30	c 74	N77-28933 *	#	US-PATENT-CLASS-352-84	c 35	N78-18391 *	#
US-PATENT-CLASS-350-173	c 74	N83-36898 *	#	US-PATENT-CLASS-350-31	c 74	N75-25706 *	#	US-PATENT-CLASS-352-84	c 35	N74-23040 *	#
US-PATENT-CLASS-350-174	c 74	N84-23248 *	#	US-PATENT-CLASS-350-312	c 16	N72-12440 *	#	US-PATENT-CLASS-352-84	c 14	N71-17627 *	#
US-PATENT-CLASS-350-174	c 74	N77-20882 *	#	US-PATENT-CLASS-350-312	c 74	N85-29750 *	#	US-PATENT-CLASS-352-84	c 14	N71-17655 *	#
US-PATENT-CLASS-350-174	c 73	N78-32848 *	#	US-PATENT-CLASS-350-315	c 74	N86-29650 *	#	US-PATENT-CLASS-352-84	c 14	N71-27215 *	#
US-PATENT-CLASS-350-175E	c 74	N80-27185 *	#	US-PATENT-CLASS-350-316	c 27	N83-36220 *	#	US-PATENT-CLASS-352-84	c 14	N73-12446 *	#
US-PATENT-CLASS-350-175FS	c 14	N72-25414 *	#	US-PATENT-CLASS-350-318	c 74	N86-29650 *	#	US-PATENT-CLASS-352-84	c 35	N74-15146 *	#
US-PATENT-CLASS-350-175NG	c 27	N78-31233 *	#	US-PATENT-CLASS-350-319	c 74	N85-29750 *	#	US-PATENT-CLASS-352-84	c 16	N71-24170 *	#
US-PATENT-CLASS-350-189	c 23	N71-24857 *	#	US-PATENT-CLASS-350-319	c 74	N86-20125 *	#	US-PATENT-CLASS-352-84	c 26	N73-26751 *	#
US-PATENT-CLASS-350-199	c 14	N73-30393 *	#	US-PATENT-CLASS-350-320	c 74	N77-28933 *	#	US-PATENT-CLASS-352-84	c 16	N73-30476 *	#
US-PATENT-CLASS-350-19	c 14	N72-22441 *	#	US-PATENT-CLASS-350-320	c 44	N77-32583 *	#	US-PATENT-CLASS-352-84	c 16	N73-30476 *	#
US-PATENT-CLASS-350-1	c 23	N69-24332 *	#	US-PATENT-CLASS-350-320	c 73	N78-32848 *	#	US-PATENT-CLASS-352-84	c 14	N73-25463 *	#
US-PATENT-CLASS-350-1	c 07	N71-29065 *	#	US-PATENT-CLASS-350-320	c 44	N79-14529 *	#	US-PATENT-CLASS-352-84	c 35	N78-18391 *	#
US-PATENT-CLASS-350-1	c 16	N72-12440 *	#	US-PATENT-CLASS-350-320	c 74	N85-29749 *	#	US-PATENT-CLASS-352-84	c 72	N74-19310 *	#
US-PATENT-CLASS-350-1	c 24	N76-24363 *	#	US-PATENT-CLASS-350-321	c 74	N85-29750 *	#	US-PATENT-CLASS-352-84	c 14	N72-17323 *	#
US-PATENT-CLASS-350-1	c 74	N78-15879 *	#	US-PATENT-CLASS-350-321	c 74	N86-21348 *	#	US-PATENT-CLASS-352-84	c 35	N74-23040 *	#
US-PATENT-CLASS-350-202	c 23	N73-20741 *	#	US-PATENT-CLASS-350-342	c 76	N85-33826 *	#	US-PATENT-CLASS-352-84	c 14	N73-12446 *	#
US-PATENT-CLASS-350-202	c 74	N77-28932 *	#	US-PATENT-CLASS-350-353	c 74	N83-19597 *	#	US-PATENT-CLASS-352-84	c 35	N76-31490 *	#
US-PATENT-CLASS-350-203	c 14	N72-25409 *	#	US-PATENT-CLASS-350-354	c 32	N86-20647 *	#	US-PATENT-CLASS-352-84	c 23	N71-16101 *	#
US-PATENT-CLASS-350-204	c 14	N73-30393 *	#	US-PATENT-CLASS-350-358	c 36	N82-29589 *	#	US-PATENT-CLASS-352-84	c 74	N78-27904 *	#
US-PATENT-CLASS-350-204	c 74	N78-17866 *	#	US-PATENT-CLASS-350-359	c 36	N80-16321 *	#	US-PATENT-CLASS-352-84	c 74	N76-19935 *	#
US-PATENT-CLASS-350-211	c 44	N76-14602 *	#	US-PATENT-CLASS-350-35	c 14	N72-22441 *	#	US-PATENT-CLASS-352-84	c 74	N76-19935 *	#
US-PATENT-CLASS-350-213	c 14	N71-15622 *	#	US-PATENT-CLASS-350-36	c 14	N72-22441 *	#	US-PATENT-CLASS-352-84	c 74	N79-11865 *	#
US-PATENT-CLASS-350-226	c 74	N80-27185 *	#	US-PATENT-CLASS-350-370	c 35	N81-33448 *	#	US-PATENT-CLASS-352-84	c 74	N79-20856 *	#
US-PATENT-CLASS-350-236	c 74	N74-15095 *	#	US-PATENT-CLASS-350-443	c 74	N84-23248 *	#	US-PATENT-CLASS-352-84	c 14	N72-20379 *	#
US-PATENT-CLASS-350-23	c 14	N72-22441 *	#	US-PATENT-CLASS-350-445	c 74	N83-36898 *	#	US-PATENT-CLASS-352-84	c 16	N73-33397 *	#
US-PATENT-CLASS-350-253	c 35	N77-27366 *	#	US-PATENT-CLASS-350-448	c 74	N86-20125 *	#	US-PATENT-CLASS-352-84	c 14	N72-27409 *	#
US-PATENT-CLASS-350-25	c 74	N80-21138 *	#	US-PATENT-CLASS-350-453	c 36	N82-32712 *	#	US-PATENT-CLASS-352-84	c 14	N73-28490 *	#
US-PATENT-CLASS-350-26	c 33	N74-20861 *	#	US-PATENT-CLASS-350-486	c 74	N83-13978 *	#	US-PATENT-CLASS-352-84	c 36	N74-21091 *	#
US-PATENT-CLASS-350-270	c 14	N72-22441 *	#	US-PATENT-CLASS-350-49	c 14	N72-22441 *	#	US-PATENT-CLASS-352-84	c 89	N74-30886 *	#
US-PATENT-CLASS-350-275	c 09	N71-19479 *	#	US-PATENT-CLASS-350-505	c 74	N85-23396 *	#	US-PATENT-CLASS-352-84	c 74	N77-22951 *	#
US-PATENT-CLASS-350-276R	c 74	N86-20125 *	#	US-PATENT-CLASS-350-505	c 74	N86-28732 *	#	US-PATENT-CLASS-352-84	c 89	N74-30886 *	#
US-PATENT-CLASS-350-276R	c 74	N86-28732 *	#	US-PATENT-CLASS-350-52	c 14	N72-22441 *	#	US-PATENT-CLASS-352-84	c 16	N73-33397 *	#
US-PATENT-CLASS-350-285	c 14	N71-15605 *	#	US-PATENT-CLASS-350-52	c 14	N72-22444 *	#	US-PATENT-CLASS-352-84	c 15	N71-28740 *	#
US-PATENT-CLASS-350-285	c 14	N71-17662 *	#	US-PATENT-CLASS-350-537	c 74	N86-20125 *	#	US-PATENT-CLASS-352-84	c 74	N80-21138 *	#</



US-PATENT-CLASS-356-152	c 74	N77-22951 *	#	US-PATENT-CLASS-356-345	c 74	N81-17888 *	#	US-PATENT-CLASS-357-30	c 44	N76-28635 *	#
US-PATENT-CLASS-356-152	c 74	N80-21138 *	#	US-PATENT-CLASS-356-345	c 74	N81-29963 *	#	US-PATENT-CLASS-357-30	c 44	N78-13526 *	#
US-PATENT-CLASS-356-152	c 37	N81-27519 *	#	US-PATENT-CLASS-356-345	c 36	N84-14509 *	#	US-PATENT-CLASS-357-30	c 44	N78-24609 *	#
US-PATENT-CLASS-356-153	c 15	N71-28740 *	#	US-PATENT-CLASS-356-345	c 74	N86-21348 *	#	US-PATENT-CLASS-357-30	c 44	N78-25527 *	#
US-PATENT-CLASS-356-153	c 23	N71-29125 *	#	US-PATENT-CLASS-356-346	c 35	N80-20563 *	#	US-PATENT-CLASS-357-30	c 44	N79-11467 *	#
US-PATENT-CLASS-356-153	c 16	N73-33397 *	#	US-PATENT-CLASS-356-346	c 74	N81-29963 *	#	US-PATENT-CLASS-357-30	c 44	N79-14528 *	#
US-PATENT-CLASS-356-153	c 18	N76-14186 *	#	US-PATENT-CLASS-356-347	c 35	N84-22929 *	#	US-PATENT-CLASS-357-30	c 44	N79-31752 *	#
US-PATENT-CLASS-356-154	c 15	N71-26673 *	#	US-PATENT-CLASS-356-349	c 36	N82-16396 *	#	US-PATENT-CLASS-357-30	c 44	N80-29835 *	#
US-PATENT-CLASS-356-159	c 36	N78-14380 *	#	US-PATENT-CLASS-356-350	c 35	N81-33448 *	#	US-PATENT-CLASS-357-30	c 44	N81-19558 *	#
US-PATENT-CLASS-356-160	c 36	N78-14380 *	#	US-PATENT-CLASS-356-351	c 35	N81-33448 *	#	US-PATENT-CLASS-357-30	c 44	N81-29525 *	#
US-PATENT-CLASS-356-161	c 26	N73-26751 *	#	US-PATENT-CLASS-356-351	c 35	N85-30282 *	#	US-PATENT-CLASS-357-30	c 44	N82-26777 *	#
US-PATENT-CLASS-356-162	c 66	N76-19888 *	#	US-PATENT-CLASS-356-352	c 74	N81-17888 *	#	US-PATENT-CLASS-357-30	c 44	N82-29709 *	#
US-PATENT-CLASS-356-165	c 38	N78-17396 *	#	US-PATENT-CLASS-356-353	c 74	N83-32577 *	#	US-PATENT-CLASS-357-30	c 44	N82-31764 *	#
US-PATENT-CLASS-356-166	c 14	N71-23175 *	#	US-PATENT-CLASS-356-356	c 36	N81-24422 *	#	US-PATENT-CLASS-357-30	c 44	N83-13579 *	#
US-PATENT-CLASS-356-167	c 14	N72-11364 *	#	US-PATENT-CLASS-356-357	c 74	N83-21949 *	#	US-PATENT-CLASS-357-30	c 44	N83-32177 *	#
US-PATENT-CLASS-356-167	c 66	N76-19888 *	#	US-PATENT-CLASS-356-358	c 74	N81-17888 *	#	US-PATENT-CLASS-357-30	c 35	N84-33765 *	#
US-PATENT-CLASS-356-167	c 74	N78-27904 *	#	US-PATENT-CLASS-356-358	c 36	N81-24422 *	#	US-PATENT-CLASS-357-30	c 33	N85-21492 *	#
US-PATENT-CLASS-356-169	c 60	N78-10709 *	#	US-PATENT-CLASS-356-358	c 35	N85-30282 *	#	US-PATENT-CLASS-357-30	c 44	N85-21768 *	#
US-PATENT-CLASS-356-171	c 74	N77-22950 *	#	US-PATENT-CLASS-356-363	c 74	N83-32577 *	#	US-PATENT-CLASS-357-30	c 44	N85-30475 *	#
US-PATENT-CLASS-356-172	c 16	N73-33397 *	#	US-PATENT-CLASS-356-369	c 35	N80-28687 *	#	US-PATENT-CLASS-357-30	c 33	N86-19516 *	#
US-PATENT-CLASS-356-172	c 36	N74-21091 *	#	US-PATENT-CLASS-356-36	c 23	N71-16365 *	#	US-PATENT-CLASS-357-30	c 76	N86-20150 *	#
US-PATENT-CLASS-356-172	c 74	N77-22951 *	#	US-PATENT-CLASS-356-37	c 45	N76-21742 *	#	US-PATENT-CLASS-357-30	c 44	N86-32875 *	#
US-PATENT-CLASS-356-17	c 14	N72-21409 *	#	US-PATENT-CLASS-356-386	c 36	N82-16396 *	#	US-PATENT-CLASS-357-32	c 35	N84-33765 *	#
US-PATENT-CLASS-356-180	c 35	N74-27860 *	#	US-PATENT-CLASS-356-394	c 33	N83-18996 *	#	US-PATENT-CLASS-357-40	c 36	N85-30305 *	#
US-PATENT-CLASS-356-186	c 35	N75-19613 *	#	US-PATENT-CLASS-356-4.5	c 74	N86-21348 *	#	US-PATENT-CLASS-357-41	c 33	N79-12321 *	#
US-PATENT-CLASS-356-188	c 35	N84-33766 *	#	US-PATENT-CLASS-356-4.5	c 74	N86-32266 *	#	US-PATENT-CLASS-357-42	c 76	N75-25730 *	#
US-PATENT-CLASS-356-189	c 35	N75-19613 *	#	US-PATENT-CLASS-356-402	c 74	N86-29650 *	#	US-PATENT-CLASS-357-45	c 33	N79-12321 *	#
US-PATENT-CLASS-356-189	c 35	N84-33766 *	#	US-PATENT-CLASS-356-404	c 35	N79-28527 *	#	US-PATENT-CLASS-357-45	c 44	N79-26475 *	#
US-PATENT-CLASS-356-18	c 14	N72-21409 *	#	US-PATENT-CLASS-356-406	c 52	N81-27783 *	#	US-PATENT-CLASS-357-46	c 36	N85-30305 *	#
US-PATENT-CLASS-356-197	c 37	N74-18123 *	#	US-PATENT-CLASS-356-407	c 43	N79-17288 *	#	US-PATENT-CLASS-357-4	c 33	N78-13320 *	#
US-PATENT-CLASS-356-199	c 36	N78-14380 *	#	US-PATENT-CLASS-356-407	c 52	N81-27783 *	#	US-PATENT-CLASS-357-4	c 76	N85-30922 *	#
US-PATENT-CLASS-356-1	c 36	N83-34304 *	#	US-PATENT-CLASS-356-416	c 43	N79-17288 *	#	US-PATENT-CLASS-357-50	c 76	N85-30922 *	#
US-PATENT-CLASS-356-201	c 75	N74-30156 *	#	US-PATENT-CLASS-356-416	c 52	N81-27783 *	#	US-PATENT-CLASS-357-52	c 76	N75-25730 *	#
US-PATENT-CLASS-356-201	c 35	N77-14411 *	#	US-PATENT-CLASS-356-419	c 74	N86-29650 *	#	US-PATENT-CLASS-357-52	c 44	N80-29835 *	#
US-PATENT-CLASS-356-202	c 26	N73-26751 *	#	US-PATENT-CLASS-356-432	c 74	N81-17888 *	#	US-PATENT-CLASS-357-54	c 76	N75-25730 *	#
US-PATENT-CLASS-356-203	c 14	N71-26788 *	#	US-PATENT-CLASS-356-432	c 25	N81-25159 *	#	US-PATENT-CLASS-357-55	c 33	N79-12321 *	#
US-PATENT-CLASS-356-204	c 35	N77-14411 *	#	US-PATENT-CLASS-356-434	c 35	N84-34705 *	#	US-PATENT-CLASS-357-55	c 33	N81-26360 *	#
US-PATENT-CLASS-356-204	c 74	N78-17867 *	#	US-PATENT-CLASS-356-437	c 25	N81-14015 *	#	US-PATENT-CLASS-357-58	c 33	N86-19516 *	#
US-PATENT-CLASS-356-207	c 45	N76-17656 *	#	US-PATENT-CLASS-356-43	c 74	N74-15095 *	#	US-PATENT-CLASS-357-59	c 44	N76-28635 *	#
US-PATENT-CLASS-356-208	c 74	N78-33913 *	#	US-PATENT-CLASS-356-43	c 75	N74-30156 *	#	US-PATENT-CLASS-357-59	c 44	N78-24609 *	#
US-PATENT-CLASS-356-209	c 23	N71-16341 *	#	US-PATENT-CLASS-356-43	c 36	N85-21639 *	#	US-PATENT-CLASS-357-59	c 44	N81-19558 *	#
US-PATENT-CLASS-356-209	c 14	N71-28993 *	#	US-PATENT-CLASS-356-446	c 74	N86-26190 *	#	US-PATENT-CLASS-357-59	c 33	N86-19516 *	#
US-PATENT-CLASS-356-209	c 14	N72-17323 *	#	US-PATENT-CLASS-356-45	c 36	N85-21639 *	#	US-PATENT-CLASS-357-5	c 33	N75-31332 *	#
US-PATENT-CLASS-356-209	c 35	N76-31490 *	#	US-PATENT-CLASS-356-4	c 14	N72-17326 *	#	US-PATENT-CLASS-357-5	c 33	N78-13320 *	#
US-PATENT-CLASS-356-210	c 74	N79-11865 *	#	US-PATENT-CLASS-356-4	c 07	N73-26119 *	#	US-PATENT-CLASS-357-60	c 33	N81-26360 *	#
US-PATENT-CLASS-356-212	c 35	N77-31465 *	#	US-PATENT-CLASS-356-4	c 36	N74-15145 *	#	US-PATENT-CLASS-357-63	c 33	N76-31409 *	#
US-PATENT-CLASS-356-213	c 39	N81-25400 *	#	US-PATENT-CLASS-356-4	c 35	N75-15014 *	#	US-PATENT-CLASS-357-63	c 44	N81-19558 *	#
US-PATENT-CLASS-356-216	c 74	N74-15095 *	#	US-PATENT-CLASS-356-4	c 36	N83-34304 *	#	US-PATENT-CLASS-357-63	c 44	N82-26777 *	#
US-PATENT-CLASS-356-216	c 35	N80-18359 *	#	US-PATENT-CLASS-356-51	c 06	N72-31141 *	#	US-PATENT-CLASS-357-65	c 44	N78-25527 *	#
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US-PATENT-CLASS-356-216	c 35	N84-22931 *	#	US-PATENT-CLASS-356-51	c 35	N83-21311 *	#	US-PATENT-CLASS-357-65	c 44	N79-31752 *	#
US-PATENT-CLASS-356-222	c 03	N72-20033 *	#	US-PATENT-CLASS-356-51	c 35	N84-34705 *	#	US-PATENT-CLASS-357-67	c 44	N78-25527 *	#
US-PATENT-CLASS-356-222	c 47	N83-32232 *	#	US-PATENT-CLASS-356-5	c 07	N73-26119 *	#	US-PATENT-CLASS-357-67	c 44	N79-11467 *	#
US-PATENT-CLASS-356-234	c 39	N81-25400 *	#	US-PATENT-CLASS-356-5	c 36	N74-15145 *	#	US-PATENT-CLASS-357-67	c 44	N79-31752 *	#
US-PATENT-CLASS-356-234	c 35	N84-22931 *	#	US-PATENT-CLASS-356-5	c 36	N75-15028 *	#	US-PATENT-CLASS-357-73	c 33	N78-13320 *	#
US-PATENT-CLASS-356-236	c 74	N77-21941 *	#	US-PATENT-CLASS-356-5	c 32	N82-23376 *	#	US-PATENT-CLASS-357-74	c 37	N79-28549 *	#
US-PATENT-CLASS-356-236	c 74	N86-26190 *	#	US-PATENT-CLASS-356-5	c 74	N85-34629 *	#	US-PATENT-CLASS-357-79	c 37	N79-28549 *	#
US-PATENT-CLASS-356-237	c 74	N77-10899 *	#	US-PATENT-CLASS-356-5	c 74	N86-32266 *	#	US-PATENT-CLASS-357-7	c 33	N75-31331 *	#
US-PATENT-CLASS-356-237	c 38	N78-17395 *	#	US-PATENT-CLASS-356-71	c 66	N76-19888 *	#	US-PATENT-CLASS-357-81	c 37	N79-28549 *	#
US-PATENT-CLASS-356-237	c 38	N78-17396 *	#	US-PATENT-CLASS-356-72	c 14	N71-23268 *	#	US-PATENT-CLASS-357-82	c 37	N79-28549 *	#
US-PATENT-CLASS-356-237	c 35	N79-28527 *	#	US-PATENT-CLASS-356-72	c 33	N73-27796 *	#	US-PATENT-CLASS-357-83	c 37	N79-28549 *	#
US-PATENT-CLASS-356-239	c 74	N77-10899 *	#	US-PATENT-CLASS-356-72	c 38	N78-32447 *	#	US-PATENT-CLASS-357-91	c 76	N75-25730 *	#
US-PATENT-CLASS-356-241	c 14	N72-32452 *	#	US-PATENT-CLASS-356-72	c 74	N80-33210 *	#	US-PATENT-CLASS-357-91	c 33	N78-27326 *	#
US-PATENT-CLASS-356-243	c 36	N80-16321 *	#	US-PATENT-CLASS-356-72	c 35	N86-32697 *	#	US-PATENT-CLASS-357-91	c 44	N80-29835 *	#
US-PATENT-CLASS-356-244	c 14	N72-17323 *	#	US-PATENT-CLASS-356-73	c 75	N74-30156 *	#	US-PATENT-CLASS-357-91	c 33	N81-26360 *	#
US-PATENT-CLASS-356-244	c 35	N76-31490 *	#	US-PATENT-CLASS-356-73	c 38	N78-32447 *	#	US-PATENT-CLASS-357-91	c 44	N86-32875 *	#
US-PATENT-CLASS-356-244	c 35	N80-28687 *	#	US-PATENT-CLASS-356-73	c 35	N84-33766 *	#	US-PATENT-CLASS-358-101	c 37	N86-21850 *	#
US-PATENT-CLASS-356-244	c 74	N86-26190 *	#	US-PATENT-CLASS-356-73	c 09	N86-32247 *	#	US-PATENT-CLASS-358-104	c 09	N78-18083 *	#
US-PATENT-CLASS-356-246	c 35	N74-27860 *	#	US-PATENT-CLASS-356-73	c 35	N86-32697 *	#	US-PATENT-CLASS-358-104	c 74	N79-13855 *	#
US-PATENT-CLASS-356-246	c 74	N78-17867 *	#	US-PATENT-CLASS-356-74	c 30	N71-15990 *	#	US-PATENT-CLASS-358-104	c 36	N83-34304 *	#
US-PATENT-CLASS-356-248	c 14	N72-22444 *	#	US-PATENT-CLASS-356-74	c 35	N84-33766 *	#	US-PATENT-CLASS-358-105	c 39	N83-20280 *	#
US-PATENT-CLASS-356-28.5	c 32	N80-24510 *	#	US-PATENT-CLASS-356-76	c 23	N71-26206 *	#	US-PATENT-CLASS-358-105	c 74	N86-21348 *	#
US-PATENT-CLASS-356-28.5	c 36	N81-24422 *	#	US-PATENT-CLASS-356-76	c 14	N71-29041 *	#	US-PATENT-CLASS-358-106	c 39	N78-16387 *	#
US-PATENT-CLASS-356-28.5	c 36	N82-32712 *	#	US-PATENT-CLASS-356-83	c 35	N75-19613 *	#	US-PATENT-CLASS-358-107	c 35	N79-18296 *	#
US-PATENT-CLASS-356-28.5	c 35	N86-32697 *	#	US-PATENT-CLASS-356-85	c 37	N74-18123 *	#	US-PATENT-CLASS-358-109	c 32	N79-20297 *	#
US-PATENT-CLASS-356-28	c 21	N71-19212 *	#	US-PATENT-CLASS-356-85	c 75	N74-30156 *	#	US-PATENT-CLASS-358-109	c 33	N81-33403 *	#
US-PATENT-CLASS-356-28	c 16	N71-24828 *	#	US-PATENT-CLASS-356-87	c 75	N74-30156 *	#	US-PATENT-CLASS-358-109	c 43	N82-13465 *	#
US-PATENT-CLASS-356-28	c 72	N74-19310 *	#	US-PATENT-CLASS-356-96	c 35	N75-19613 *	#	US-PATENT-CLASS-358-109	c 36	N83-34304 *	#
US-PATENT-CLASS-356-28	c 36	N75-15028 *	#	US-PATENT-CLASS-356-97	c 35	N77-14411 *	#	US-PATENT-CLASS-358-109	c 32	N85-29117 *	#
US-PATENT-CLASS-356-28	c 35	N75-16783 *	#	US-PATENT-CLASS-357-12	c 33	N85-21492 *	#	US-PATENT-CLASS-358-111	c 52	N79-10724 *	#
US-PATENT-CLASS-356-28	c 36	N76-14447 *	#	US-PATENT-CLASS-357-15	c 44	N78-13526 *	#	US-PATENT-CLASS-358-125	c 74	N84-23247 *	#
US-PATENT-CLASS-356-28	c 36	N77-25501 *	#	US-PATENT-CLASS-357-15	c 44	N79-11467 *	#	US-PATENT-CLASS-358-125	c 74	N86-21348 *	#
US-PATENT-CLASS-356-28	c 74	N78-17866 *	#	US-PATENT-CLASS-357-15	c 44	N81-29525 *	#	US-PATENT-CLASS-358-133	c 32	N77-24328 *	#
US-PATENT-CLASS-356-28	c 35	N79-18296 *	#	US-PATENT-CLASS-357-15	c 76	N86-20150 *	#	US-PATENT-CLASS-358-133	c 32	N85-29117 *	#
US-PATENT-CLASS-356-28	c 36	N80-16321 *	#	US-PATENT-CLASS-357-16	c 44	N78-13526 *	#	US-PATENT-CLASS-358-138	c 32	N77-24328 *	#
US-PATENT-CLASS-356-300	c 43	N79-17288 *	#	US-PATENT-CLASS-357-16	c 44	N79-11467 *	#	US-PATENT-CLASS-358-142	c 74	N78-14889 *	#
US-PATENT-CLASS-356-311	c 35	N86-25753 *	#	US-PATENT-CLASS-357-17	c 36	N85-30305 *	#	US-PATENT-CLASS-358-161	c 32	N85-21427 *	#
US-PATENT-CLASS-356-318	c 35	N86-25753 *	#	US-PATENT-CLASS-357-22	c 33	N79-12321 *	#	US-PATENT-CLASS-358-168	c 32	N86-20647 *	#
US-PATENT-CLASS-356											

US-PATENT-CLASS-358-36	c 32	N75-21485 *	US-PATENT-CLASS-364-510	c 34	N81-28402 *	US-PATENT-CLASS-374-162R	c 74	N82-30071 *
US-PATENT-CLASS-358-41	c 74	N78-17885 *	US-PATENT-CLASS-364-514	c 33	N81-33405 *	US-PATENT-CLASS-374-163	c 35	N86-19580 *
US-PATENT-CLASS-358-44	c 74	N77-18893 *	US-PATENT-CLASS-364-522	c 39	N83-20280 *	US-PATENT-CLASS-374-17	c 35	N83-29650 *
US-PATENT-CLASS-358-55	c 74	N78-17885 *	US-PATENT-CLASS-364-556	c 36	N85-28284 *	US-PATENT-CLASS-374-183	c 33	N86-32624 *
US-PATENT-CLASS-358-81	c 32	N79-20297 *	US-PATENT-CLASS-364-567	c 35	N84-14491 *	US-PATENT-CLASS-374-1	c 35	N84-28019 *
US-PATENT-CLASS-358-88	c 74	N86-21348 *	US-PATENT-CLASS-364-558	c 35	N84-14491 *	US-PATENT-CLASS-374-208	c 37	N85-21651 *
US-PATENT-CLASS-358-98	c 52	N79-10724 *	US-PATENT-CLASS-364-558	c 07	N84-22559 *	US-PATENT-CLASS-374-210	c 37	N85-21651 *
US-PATENT-CLASS-36-119	c 54	N78-17875 *	US-PATENT-CLASS-364-559	c 39	N83-20280 *	US-PATENT-CLASS-374-46	c 34	N83-34221 *
US-PATENT-CLASS-36-92	c 54	N78-17875 *	US-PATENT-CLASS-364-560	c 43	N79-26439 *	US-PATENT-CLASS-374-46	c 25	N86-19413 *
US-PATENT-CLASS-360-101	c 35	N76-18391 *	US-PATENT-CLASS-364-566	c 18	N81-26412 *	US-PATENT-CLASS-374-51	c 39	N83-32081 *
US-PATENT-CLASS-360-10	c 35	N76-18391 *	US-PATENT-CLASS-364-571	c 34	N81-26402 *	US-PATENT-CLASS-374-8	c 25	N86-19413 *
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US-PATENT-CLASS-360-26	c 33	N78-18353 *	US-PATENT-CLASS-364-578	c 33	N85-34333 *	US-PATENT-CLASS-375-106	c 60	N82-16747 *
US-PATENT-CLASS-360-31	c 35	N77-17426 *	US-PATENT-CLASS-364-604	c 32	N79-14267 *	US-PATENT-CLASS-375-106	c 32	N82-31583 *
US-PATENT-CLASS-360-35	c 35	N76-18391 *	US-PATENT-CLASS-364-713	c 32	N79-20297 *	US-PATENT-CLASS-375-107	c 32	N81-14166 *
US-PATENT-CLASS-360-51	c 33	N78-18353 *	US-PATENT-CLASS-364-717	c 32	N82-31583 *	US-PATENT-CLASS-375-114	c 60	N82-16747 *
US-PATENT-CLASS-360-9	c 35	N76-18391 *	US-PATENT-CLASS-364-723	c 60	N85-33701 *	US-PATENT-CLASS-375-115	c 32	N81-15179 *
US-PATENT-CLASS-361-100	c 33	N83-34190 *	US-PATENT-CLASS-364-728	c 32	N79-14267 *	US-PATENT-CLASS-375-120	c 32	N84-27952 *
US-PATENT-CLASS-361-141	c 33	N82-11357 *	US-PATENT-CLASS-364-728	c 60	N86-21154 *	US-PATENT-CLASS-375-1	c 32	N81-15179 *
US-PATENT-CLASS-361-170	c 33	N79-28415 *	US-PATENT-CLASS-364-822	c 32	N83-18975 *	US-PATENT-CLASS-375-1	c 35	N81-19427 *
US-PATENT-CLASS-361-226	c 28	N82-18401 *	US-PATENT-CLASS-364-822	c 74	N86-21448 *	US-PATENT-CLASS-375-1	c 33	N81-33405 *
US-PATENT-CLASS-361-230	c 28	N82-18401 *	US-PATENT-CLASS-364-825	c 33	N82-24317 *	US-PATENT-CLASS-375-34	c 35	N81-19427 *
US-PATENT-CLASS-361-283	c 33	N82-26572 *	US-PATENT-CLASS-364-853	c 60	N85-33701 *	US-PATENT-CLASS-375-54	c 33	N81-15192 *
US-PATENT-CLASS-361-334	c 35	N81-28431 *	US-PATENT-CLASS-364-861	c 32	N83-18975 *	US-PATENT-CLASS-375-58	c 32	N81-15179 *
US-PATENT-CLASS-361-395	c 32	N78-24391 *	US-PATENT-CLASS-364-900	c 52	N79-12694 *	US-PATENT-CLASS-375-67	c 33	N81-15182 *
US-PATENT-CLASS-361-56	c 33	N81-27397 *	US-PATENT-CLASS-364-900	c 60	N79-20751 *	US-PATENT-CLASS-375-77	c 32	N84-27952 *
US-PATENT-CLASS-361-91	c 33	N81-27397 *	US-PATENT-CLASS-364-900	c 60	N81-27814 *	US-PATENT-CLASS-375-81	c 32	N84-27952 *
US-PATENT-CLASS-362-11	c 74	N81-17886 *	US-PATENT-CLASS-364-900	c 60	N83-32342 *	US-PATENT-CLASS-375-99	c 35	N81-19427 *
US-PATENT-CLASS-362-241	c 74	N81-17886 *	US-PATENT-CLASS-364-900	c 60	N84-28491 *	US-PATENT-CLASS-376-159	c 25	N85-21279 *
US-PATENT-CLASS-362-269	c 17	N78-17140 *	US-PATENT-CLASS-365-120	c 33	N84-28492 *	US-PATENT-CLASS-376-104	c 33	N85-29147 *
US-PATENT-CLASS-363-100	c 33	N85-29147 *	US-PATENT-CLASS-365-768	c 32	N81-29342 *	US-PATENT-CLASS-376-112	c 33	N85-29147 *
US-PATENT-CLASS-363-101	c 33	N78-32341 *	US-PATENT-CLASS-366-106	c 32	N86-27513 *	US-PATENT-CLASS-376-2	c 34	N83-19015 *
US-PATENT-CLASS-363-132	c 33	N81-19392 *	US-PATENT-CLASS-366-114	c 71	N84-28568 *	US-PATENT-CLASS-376-2	c 74	N84-11920 *
US-PATENT-CLASS-363-134	c 33	N79-24257 *	US-PATENT-CLASS-367-102	c 32	N83-35781 *	US-PATENT-CLASS-376-43	c 34	N83-19015 *
US-PATENT-CLASS-363-147	c 44	N81-12542 *	US-PATENT-CLASS-367-102	c 32	N82-18443 *	US-PATENT-CLASS-376-58	c 74	N86-20124 *
US-PATENT-CLASS-363-16	c 33	N78-32341 *	US-PATENT-CLASS-367-181	c 33	N82-26572 *	US-PATENT-CLASS-376-59	c 74	N86-20126 *
US-PATENT-CLASS-363-17	c 33	N82-18494 *	US-PATENT-CLASS-367-189	c 35	N84-22933 *	US-PATENT-CLASS-376-85	c 74	N86-20124 *
US-PATENT-CLASS-363-19	c 33	N85-29147 *	US-PATENT-CLASS-367-26	c 39	N80-10507 *	US-PATENT-CLASS-376-82	c 74	N86-21348 *
US-PATENT-CLASS-363-21	c 33	N81-19392 *	US-PATENT-CLASS-367-27	c 31	N80-32584 *	US-PATENT-CLASS-384-101	c 37	N85-33490 *
US-PATENT-CLASS-363-21	c 33	N81-19393 *	US-PATENT-CLASS-367-36	c 31	N80-32584 *	US-PATENT-CLASS-384-106	c 37	N86-19606 *
US-PATENT-CLASS-363-22	c 33	N84-33663 *	US-PATENT-CLASS-367-57	c 31	N80-32584 *	US-PATENT-CLASS-384-124	c 27	N83-34043 *
US-PATENT-CLASS-363-23	c 33	N85-29147 *	US-PATENT-CLASS-367-88	c 32	N83-31918 *	US-PATENT-CLASS-384-99	c 37	N85-33490 *
US-PATENT-CLASS-363-24	c 33	N81-33404 *	US-PATENT-CLASS-367-88	c 43	N86-19711 *	US-PATENT-CLASS-39-25.35	c 33	N86-20671 *
US-PATENT-CLASS-363-25	c 33	N84-16453 *	US-PATENT-CLASS-367-95	c 32	N82-23376 *	US-PATENT-CLASS-4-10	c 54	N74-20725 *
US-PATENT-CLASS-363-27	c 44	N81-12542 *	US-PATENT-CLASS-368-184	c 33	N83-36357 *	US-PATENT-CLASS-4-110	c 05	N72-22093 *
US-PATENT-CLASS-363-36	c 33	N81-19393 *	US-PATENT-CLASS-368-200	c 33	N83-36357 *	US-PATENT-CLASS-4-120	c 54	N74-20725 *
US-PATENT-CLASS-363-40	c 33	N81-19393 *	US-PATENT-CLASS-368-201	c 33	N83-36357 *	US-PATENT-CLASS-4-144.3	c 52	N81-24711 *
US-PATENT-CLASS-363-47	c 33	N81-19393 *	US-PATENT-CLASS-368-47	c 33	N81-14221 *	US-PATENT-CLASS-4-144.3	c 52	N81-28740 *
US-PATENT-CLASS-363-49	c 33	N84-33663 *	US-PATENT-CLASS-370-100	c 27	N81-15104 *	US-PATENT-CLASS-4-498	c 44	N84-34792 *
US-PATENT-CLASS-363-53	c 33	N77-30365 *	US-PATENT-CLASS-370-58	c 60	N82-16747 *	US-PATENT-CLASS-4-99	c 05	N72-22093 *
US-PATENT-CLASS-363-54	c 33	N83-34190 *	US-PATENT-CLASS-370-67	c 33	N82-27814 *	US-PATENT-CLASS-40-28	c 12	N71-18603 *
US-PATENT-CLASS-363-56	c 33	N79-24254 *	US-PATENT-CLASS-370-85	c 33	N82-29538 *	US-PATENT-CLASS-403-102	c 37	N85-30336 *
US-PATENT-CLASS-363-56	c 33	N81-14220 *	US-PATENT-CLASS-371-20	c 33	N81-14221 *	US-PATENT-CLASS-403-105	c 37	N79-14382 *
US-PATENT-CLASS-363-56	c 33	N81-33404 *	US-PATENT-CLASS-371-25	c 33	N81-26359 *	US-PATENT-CLASS-403-113	c 37	N86-19605 *
US-PATENT-CLASS-363-57	c 33	N78-10377 *	US-PATENT-CLASS-371-68	c 60	N81-26359 *	US-PATENT-CLASS-403-120	c 37	N86-19605 *
US-PATENT-CLASS-363-60	c 33	N78-32341 *	US-PATENT-CLASS-371-68	c 32	N82-29013 *	US-PATENT-CLASS-403-143	c 18	N85-29991 *
US-PATENT-CLASS-363-61	c 33	N81-12542 *	US-PATENT-CLASS-371-68	c 32	N83-13323 *	US-PATENT-CLASS-403-15	c 37	N85-30334 *
US-PATENT-CLASS-363-61	c 33	N82-18494 *	US-PATENT-CLASS-372-100	c 36	N84-14509 *	US-PATENT-CLASS-403-16	c 37	N85-30334 *
US-PATENT-CLASS-363-65	c 33	N84-16453 *	US-PATENT-CLASS-372-103	c 36	N84-28065 *	US-PATENT-CLASS-403-171	c 31	N81-25258 *
US-PATENT-CLASS-363-67	c 33	N84-16453 *	US-PATENT-CLASS-372-108	c 36	N84-14509 *	US-PATENT-CLASS-403-171	c 31	N86-19479 *
US-PATENT-CLASS-363-70	c 33	N77-30365 *	US-PATENT-CLASS-372-20	c 36	N84-22943 *	US-PATENT-CLASS-403-179	c 27	N76-14264 *
US-PATENT-CLASS-363-71	c 33	N79-24254 *	US-PATENT-CLASS-372-25	c 33	N83-34189 *	US-PATENT-CLASS-403-217	c 37	N82-32732 *
US-PATENT-CLASS-363-71	c 33	N79-24257 *	US-PATENT-CLASS-372-28	c 36	N84-22943 *	US-PATENT-CLASS-403-273	c 37	N77-23482 *
US-PATENT-CLASS-363-71	c 33	N81-14220 *	US-PATENT-CLASS-372-32	c 36	N84-22943 *	US-PATENT-CLASS-403-282	c 26	N83-10170 *
US-PATENT-CLASS-363-71	c 33	N84-16453 *	US-PATENT-CLASS-372-32	c 33	N85-34333 *	US-PATENT-CLASS-403-28	c 27	N76-14264 *
US-PATENT-CLASS-363-71	c 33	N85-29147 *	US-PATENT-CLASS-372-38	c 36	N85-30305 *	US-PATENT-CLASS-403-28	c 37	N85-29285 *
US-PATENT-CLASS-363-78	c 33	N81-14220 *	US-PATENT-CLASS-372-46	c 36	N85-30305 *	US-PATENT-CLASS-403-312	c 37	N86-27630 *
US-PATENT-CLASS-363-87	c 33	N83-10345 *	US-PATENT-CLASS-372-4	c 36	N84-28065 *	US-PATENT-CLASS-403-315	c 37	N82-24494 *
US-PATENT-CLASS-363-89	c 33	N78-10377 *	US-PATENT-CLASS-372-50	c 36	N85-30305 *	US-PATENT-CLASS-403-317	c 37	N82-32732 *
US-PATENT-CLASS-363-95	c 33	N79-24257 *	US-PATENT-CLASS-372-55	c 36	N82-28616 *	US-PATENT-CLASS-403-322	c 37	N85-21649 *
US-PATENT-CLASS-363-97	c 33	N79-24254 *	US-PATENT-CLASS-372-56	c 36	N83-10417 *	US-PATENT-CLASS-403-322	c 18	N84-22605 *
US-PATENT-CLASS-364-106	c 07	N81-19115 *	US-PATENT-CLASS-372-58	c 36	N82-28616 *	US-PATENT-CLASS-403-322	c 37	N85-30334 *
US-PATENT-CLASS-364-120	c 52	N79-12694 *	US-PATENT-CLASS-372-59	c 36	N83-10417 *	US-PATENT-CLASS-403-328	c 18	N86-20469 *
US-PATENT-CLASS-364-200	c 62	N81-24779 *	US-PATENT-CLASS-372-60	c 36	N83-10417 *	US-PATENT-CLASS-403-331	c 37	N82-32732 *
US-PATENT-CLASS-364-200	c 60	N81-27814 *	US-PATENT-CLASS-372-71	c 36	N84-28065 *	US-PATENT-CLASS-403-340	c 37	N82-32732 *
US-PATENT-CLASS-364-200	c 60	N83-25378 *	US-PATENT-CLASS-372-79	c 35	N84-12444 *	US-PATENT-CLASS-403-348	c 37	N85-30336 *
US-PATENT-CLASS-364-200	c 60	N83-32342 *	US-PATENT-CLASS-372-79	c 36	N84-16542 *	US-PATENT-CLASS-403-388	c 37	N86-27630 *
US-PATENT-CLASS-364-200	c 32	N85-21428 *	US-PATENT-CLASS-372-82	c 36	N86-29204 *	US-PATENT-CLASS-403-408.1	c 37	N86-27630 *
US-PATENT-CLASS-364-200	c 60	N85-21992 *	US-PATENT-CLASS-372-82	c 36	N82-28616 *	US-PATENT-CLASS-403-408	c 37	N85-29285 *
US-PATENT-CLASS-364-300	c 52	N79-12694 *	US-PATENT-CLASS-372-93	c 36	N84-14509 *	US-PATENT-CLASS-403-56	c 18	N85-29991 *
US-PATENT-CLASS-364-400	c 33	N85-29142 *	US-PATENT-CLASS-372-93	c 36	N82-28616 *	US-PATENT-CLASS-403-64	c 31	N86-19479 *
US-PATENT-CLASS-364-413	c 39	N83-20280 *	US-PATENT-CLASS-372-94	c 36	N84-14509 *	US-PATENT-CLASS-403-76	c 18	N85-29991 *
US-PATENT-CLASS-364-415	c 52	N79-12694 *	US-PATENT-CLASS-372-98	c 36	N84-28065 *	US-PATENT-CLASS-403-90	c 18	N85-29991 *
US-PATENT-CLASS-364-415	c 35	N84-12445 *	US-PATENT-CLASS-374-115	c 35	N84-14509 *	US-PATENT-CLASS-405-229	c 44	N79-24432 *
US-PATENT-CLASS-364-417	c 52	N79-10724 *	US-PATENT-CLASS-374-117	c 52	N86-19580 *	US-PATENT-CLASS-405-263	c 44	N79-24432 *
US-PATENT-CLASS-364-431	c 07	N81-19115 *	US-PATENT-CLASS-374-120	c 35	N86-19580 *	US-PATENT-CLASS-406-155	c 37	N84-16561 *
US-PATENT-CLASS-364-433	c 06	N86-27280 *	US-PATENT-CLASS-374-122	c 06	N86-19580 *	US-PATENT-CLASS-407-117	c 37	N81-14319 *
US-PATENT-CLASS-364-434	c 08	N79-23097 *	US-PATENT-CLASS-374-122	c 43	N85-21723 *	US-PATENT-CLASS-407-85	c 37	N81-14319 *
US-PATENT-CLASS-364-434	c 08	N81-24106 *	US-PATENT-CLASS-374-123	c 06	N83-10040 *	US-PATENT-CLASS-408-1R	c 37	N81-14319 *
US-PATENT-CLASS-364-435	c 06	N86-27280 *	US-PATENT-CLASS-374-123	c 36	N85-21639 *	US-PATENT-CLASS-408-1R	c 31	N83-27058 *
US-PATENT-CLASS-364-452	c 04	N84-27713 *	US-PATENT-CLASS-374-160	c 52	N85-30618 *	US-PATENT-CLASS-408-111	c 37	N74-25968 *
US-PATENT-CLASS-364-453	c 18	N81-29152 *				US-PATENT-CLASS-408-112	c 37	N75-25186 *
US-PATENT-CLASS-364-453	c 33	N85-29142 *						
US-PATENT-CLASS-364-458	c 32	N79-14267 *						

US-PATENT-CLASS-408-137	c 15	N71-33518 *	US-PATENT-CLASS-416-127	c 02	N72-11018 *	US-PATENT-CLASS-422-103	c 35	N85-29213 *	#
US-PATENT-CLASS-408-186	c 37	N75-25186 *	US-PATENT-CLASS-416-130	c 02	N72-11018 *	US-PATENT-CLASS-422-109	c 35	N81-24724 *	#
US-PATENT-CLASS-408-193	c 37	N75-25186 *	US-PATENT-CLASS-416-132B	c 37	N84-12493 *	US-PATENT-CLASS-422-121	c 35	N84-17555 *	#
US-PATENT-CLASS-408-61	c 31	N83-27058 *	US-PATENT-CLASS-416-132R	c 05	N79-17847 *	US-PATENT-CLASS-422-129	c 37	N85-21652 *	#
US-PATENT-CLASS-408-80	c 37	N74-25968 *	US-PATENT-CLASS-416-135	c 07	N77-32148 *	US-PATENT-CLASS-422-169	c 35	N84-17555 *	#
US-PATENT-CLASS-409-131	c 31	N83-27058 *	US-PATENT-CLASS-416-138	c 05	N77-17029 *	US-PATENT-CLASS-422-178	c 35	N84-17555 *	#
US-PATENT-CLASS-41R	c 27	N81-15104 *	US-PATENT-CLASS-416-138	c 05	N79-17847 *	US-PATENT-CLASS-422-186	c 25	N82-28368 *	#
US-PATENT-CLASS-410-156	c 37	N85-34401 *	US-PATENT-CLASS-416-141	c 05	N77-17029 *	US-PATENT-CLASS-422-186	c 35	N84-17555 *	#
US-PATENT-CLASS-410-79	c 18	N85-29991 *	US-PATENT-CLASS-416-141	c 37	N78-10468 *	US-PATENT-CLASS-422-198	c 37	N80-10494 *	#
US-PATENT-CLASS-410-90	c 18	N85-29991 *	US-PATENT-CLASS-416-144	c 35	N78-24515 *	US-PATENT-CLASS-422-198	c 25	N82-28368 *	#
US-PATENT-CLASS-411-103	c 37	N85-30335 *	US-PATENT-CLASS-416-145	c 05	N85-29947 *	US-PATENT-CLASS-422-199	c 37	N80-10494 *	#
US-PATENT-CLASS-411-108	c 37	N85-30335 *	US-PATENT-CLASS-416-149	c 02	N72-11018 *	US-PATENT-CLASS-422-199	c 37	N85-21652 *	#
US-PATENT-CLASS-411-353	c 37	N83-19091 *	US-PATENT-CLASS-416-153	c 07	N77-14025 *	US-PATENT-CLASS-422-200	c 44	N83-10501 *	#
US-PATENT-CLASS-411-368	c 37	N85-29285 *	US-PATENT-CLASS-416-157B	c 07	N79-14095 *	US-PATENT-CLASS-422-202	c 44	N83-10501 *	#
US-PATENT-CLASS-411-378	c 37	N85-29285 *	US-PATENT-CLASS-416-160	c 07	N77-14025 *	US-PATENT-CLASS-422-208	c 37	N80-10494 *	#
US-PATENT-CLASS-411-426	c 37	N85-29285 *	US-PATENT-CLASS-416-160	c 07	N79-14095 *	US-PATENT-CLASS-422-224	c 31	N80-18231 *	#
US-PATENT-CLASS-411-501	c 37	N85-29285 *	US-PATENT-CLASS-416-162	c 07	N77-14025 *	US-PATENT-CLASS-422-224	c 44	N83-10501 *	#
US-PATENT-CLASS-411-517	c 37	N83-19091 *	US-PATENT-CLASS-416-162	c 07	N79-14095 *	US-PATENT-CLASS-422-235	c 37	N80-10494 *	#
US-PATENT-CLASS-411-531	c 37	N85-29285 *	US-PATENT-CLASS-416-165	c 07	N77-14025 *	US-PATENT-CLASS-422-242	c 37	N80-10494 *	#
US-PATENT-CLASS-414-1	c 37	N80-14398 *	US-PATENT-CLASS-416-167	c 07	N77-14025 *	US-PATENT-CLASS-422-246	c 76	N80-32244 *	#
US-PATENT-CLASS-414-1	c 37	N81-14320 *	US-PATENT-CLASS-416-167	c 07	N79-14095 *	US-PATENT-CLASS-422-246	c 33	N81-19389 *	#
US-PATENT-CLASS-414-1	c 54	N86-28618 *	US-PATENT-CLASS-416-174	c 37	N85-34402 *	US-PATENT-CLASS-422-246	c 76	N82-30105 *	#
US-PATENT-CLASS-414-217	c 37	N85-29286 *	US-PATENT-CLASS-416-190	c 07	N77-32148 *	US-PATENT-CLASS-422-246	c 76	N84-35113 *	#
US-PATENT-CLASS-414-222	c 37	N82-32731 *	US-PATENT-CLASS-416-193A	c 07	N77-32148 *	US-PATENT-CLASS-422-249	c 33	N81-19389 *	#
US-PATENT-CLASS-414-226	c 37	N82-32731 *	US-PATENT-CLASS-416-1	c 34	N83-27144 *	US-PATENT-CLASS-422-249	c 76	N84-35113 *	#
US-PATENT-CLASS-414-288	c 85	N85-34722 *	US-PATENT-CLASS-416-200	c 02	N72-11018 *	US-PATENT-CLASS-422-27	c 54	N81-24724 *	#
US-PATENT-CLASS-414-328	c 85	N85-34722 *	US-PATENT-CLASS-416-214A	c 07	N78-33101 *	US-PATENT-CLASS-422-30	c 54	N81-24724 *	#
US-PATENT-CLASS-414-373	c 85	N85-34722 *	US-PATENT-CLASS-416-220R	c 07	N77-27116 *	US-PATENT-CLASS-422-34	c 54	N81-24724 *	#
US-PATENT-CLASS-414-4	c 37	N79-28551 *	US-PATENT-CLASS-416-221	c 37	N78-10468 *	US-PATENT-CLASS-422-40	c 35	N82-11432 *	#
US-PATENT-CLASS-414-4	c 54	N81-26718 *	US-PATENT-CLASS-416-221	c 07	N77-27116 *	US-PATENT-CLASS-422-41	c 52	N79-14749 *	#
US-PATENT-CLASS-414-4	c 37	N86-20789 *	US-PATENT-CLASS-416-223R	c 02	N84-11136 *	US-PATENT-CLASS-422-48	c 52	N79-14749 *	#
US-PATENT-CLASS-414-5	c 54	N86-28618 *	US-PATENT-CLASS-416-223R	c 02	N84-28732 *	US-PATENT-CLASS-422-52	c 51	N80-16714 *	#
US-PATENT-CLASS-414-6	c 54	N79-24652 *	US-PATENT-CLASS-416-223	c 07	N74-28226 *	US-PATENT-CLASS-422-52	c 51	N83-27569 *	#
US-PATENT-CLASS-414-718	c 37	N86-20789 *	US-PATENT-CLASS-416-224	c 24	N77-19170 *	US-PATENT-CLASS-422-68	c 51	N80-27067 *	#
US-PATENT-CLASS-414-730	c 37	N81-27519 *	US-PATENT-CLASS-416-224	c 07	N84-22560 *	US-PATENT-CLASS-422-78	c 25	N86-19413 *	#
US-PATENT-CLASS-414-730	c 37	N86-19603 *	US-PATENT-CLASS-416-228	c 05	N80-14107 *	US-PATENT-CLASS-422-80	c 25	N82-12166 *	#
US-PATENT-CLASS-414-735	c 54	N81-26718 *	US-PATENT-CLASS-416-230	c 24	N77-19170 *	US-PATENT-CLASS-422-86	c 35	N85-29213 *	#
US-PATENT-CLASS-414-739	c 37	N82-32731 *	US-PATENT-CLASS-416-233	c 07	N84-22560 *	US-PATENT-CLASS-422-88	c 35	N85-29213 *	#
US-PATENT-CLASS-414-744A	c 54	N81-26718 *	US-PATENT-CLASS-416-237	c 07	N74-28226 *	US-PATENT-CLASS-422-9	c 45	N80-14579 *	#
US-PATENT-CLASS-414-753	c 37	N86-20789 *	US-PATENT-CLASS-416-238	c 05	N80-14107 *	US-PATENT-CLASS-423-DIG.10	c 24	N84-22695 *	#
US-PATENT-CLASS-414-786	c 85	N85-34722 *	US-PATENT-CLASS-416-23	c 05	N85-29947 *	US-PATENT-CLASS-423-DIG.10	c 31	N85-20153 *	#
US-PATENT-CLASS-414-7	c 54	N86-28618 *	US-PATENT-CLASS-416-241A	c 07	N77-32148 *	US-PATENT-CLASS-423-131	c 28	N81-15119 *	#
US-PATENT-CLASS-414-8	c 54	N86-28620 *	US-PATENT-CLASS-416-241R	c 26	N84-35555 *	US-PATENT-CLASS-423-149	c 26	N80-14229 *	#
US-PATENT-CLASS-415-DIG.8	c 44	N82-24639 *	US-PATENT-CLASS-416-242	c 02	N84-11136 *	US-PATENT-CLASS-423-1	c 28	N81-15119 *	#
US-PATENT-CLASS-415-DIG.8	c 44	N84-23018 *	US-PATENT-CLASS-416-242	c 02	N84-28732 *	US-PATENT-CLASS-423-231	c 25	N74-12813 *	#
US-PATENT-CLASS-415-101	c 44	N80-21828 *	US-PATENT-CLASS-416-244A	c 07	N78-33101 *	US-PATENT-CLASS-423-235	c 25	N82-28368 *	#
US-PATENT-CLASS-415-115	c 07	N79-10057 *	US-PATENT-CLASS-416-248	c 37	N78-10468 *	US-PATENT-CLASS-423-242	c 45	N79-12584 *	#
US-PATENT-CLASS-415-115	c 34	N83-27144 *	US-PATENT-CLASS-416-25	c 05	N75-12930 *	US-PATENT-CLASS-423-249	c 25	N76-27383 *	#
US-PATENT-CLASS-415-115	c 07	N84-33410 *	US-PATENT-CLASS-416-2	c 44	N79-14527 *	US-PATENT-CLASS-423-293	c 26	N80-14229 *	#
US-PATENT-CLASS-415-115	c 34	N85-33433 *	US-PATENT-CLASS-416-500	c 05	N81-19087 *	US-PATENT-CLASS-423-303	c 44	N84-23019 *	#
US-PATENT-CLASS-415-116	c 07	N79-10057 *	US-PATENT-CLASS-416-500	c 05	N85-29947 *	US-PATENT-CLASS-423-33-5	c 25	N79-28253 *	#
US-PATENT-CLASS-415-118	c 35	N83-35338 *	US-PATENT-CLASS-416-51	c 05	N79-17847 *	US-PATENT-CLASS-423-345	c 76	N76-25049 *	#
US-PATENT-CLASS-415-143	c 34	N79-20335 *	US-PATENT-CLASS-416-61	c 35	N78-24515 *	US-PATENT-CLASS-423-345	c 76	N79-23798 *	#
US-PATENT-CLASS-415-145	c 07	N77-28118 *	US-PATENT-CLASS-416-61	c 37	N79-14382 *	US-PATENT-CLASS-423-346	c 76	N76-25049 *	#
US-PATENT-CLASS-415-145	c 07	N82-32366 *	US-PATENT-CLASS-416-88	c 05	N79-17847 *	US-PATENT-CLASS-423-348	c 26	N80-14229 *	#
US-PATENT-CLASS-415-170-R	c 37	N85-34402 *	US-PATENT-CLASS-416-89	c 05	N79-17847 *	US-PATENT-CLASS-423-350	c 37	N80-10494 *	#
US-PATENT-CLASS-415-174	c 37	N79-18318 *	US-PATENT-CLASS-416-92	c 07	N84-22560 *	US-PATENT-CLASS-423-350	c 31	N80-18231 *	#
US-PATENT-CLASS-415-174	c 37	N80-26658 *	US-PATENT-CLASS-416-97A	c 34	N85-33433 *	US-PATENT-CLASS-423-352	c 36	N76-18427 *	#
US-PATENT-CLASS-415-174	c 37	N82-19540 *	US-PATENT-CLASS-416-97R	c 34	N83-27144 *	US-PATENT-CLASS-423-407	c 24	N76-14203 *	#
US-PATENT-CLASS-415-174	c 27	N82-29453 *	US-PATENT-CLASS-417-138	c 07	N84-22560 *	US-PATENT-CLASS-423-414	c 24	N84-22695 *	#
US-PATENT-CLASS-415-174	c 18	N83-20996 *	US-PATENT-CLASS-417-141	c 35	N75-19611 *	US-PATENT-CLASS-423-414	c 31	N85-20153 *	#
US-PATENT-CLASS-415-174	c 37	N84-22957 *	US-PATENT-CLASS-417-152	c 44	N76-29701 *	US-PATENT-CLASS-423-417	c 26	N80-14229 *	#
US-PATENT-CLASS-415-174	c 37	N85-34402 *	US-PATENT-CLASS-417-159	c 15	N72-24489 *	US-PATENT-CLASS-423-419P	c 25	N83-33977 *	#
US-PATENT-CLASS-415-174	c 37	N86-20788 *	US-PATENT-CLASS-417-159	c 09	N84-27749 *	US-PATENT-CLASS-423-445	c 24	N84-22695 *	#
US-PATENT-CLASS-415-175	c 07	N83-31603 *	US-PATENT-CLASS-417-15	c 37	N83-26078 *	US-PATENT-CLASS-423-445	c 31	N85-20153 *	#
US-PATENT-CLASS-415-175	c 07	N82-32366 *	US-PATENT-CLASS-417-207	c 44	N76-29701 *	US-PATENT-CLASS-423-445	c 24	N85-21267 *	#
US-PATENT-CLASS-415-178	c 07	N83-31603 *	US-PATENT-CLASS-417-209	c 34	N76-17317 *	US-PATENT-CLASS-423-446	c 15	N73-19457 *	#
US-PATENT-CLASS-415-180	c 07	N77-23106 *	US-PATENT-CLASS-417-209	c 44	N76-29701 *	US-PATENT-CLASS-423-446	c 24	N84-22695 *	#
US-PATENT-CLASS-415-180	c 37	N78-10467 *	US-PATENT-CLASS-417-225	c 35	N78-10428 *	US-PATENT-CLASS-423-446	c 31	N85-20153 *	#
US-PATENT-CLASS-415-181	c 07	N74-28226 *	US-PATENT-CLASS-417-328	c 37	N84-28081 *	US-PATENT-CLASS-423-446	c 24	N85-21267 *	#
US-PATENT-CLASS-415-181	c 07	N74-31270 *	US-PATENT-CLASS-417-36	c 35	N75-19611 *	US-PATENT-CLASS-423-447.2	c 24	N83-25789 *	#
US-PATENT-CLASS-415-196	c 37	N80-26658 *	US-PATENT-CLASS-417-379	c 44	N76-29701 *	US-PATENT-CLASS-423-447.6	c 24	N83-25789 *	#
US-PATENT-CLASS-415-196	c 37	N82-19540 *	US-PATENT-CLASS-417-383	c 37	N80-31790 *	US-PATENT-CLASS-423-447.7	c 24	N83-25789 *	#
US-PATENT-CLASS-415-196	c 37	N85-34402 *	US-PATENT-CLASS-417-391	c 15	N73-24513 *	US-PATENT-CLASS-423-449	c 24	N84-22695 *	#
US-PATENT-CLASS-415-197	c 18	N83-20996 *	US-PATENT-CLASS-417-392	c 37	N84-28081 *	US-PATENT-CLASS-423-449	c 31	N85-20153 *	#
US-PATENT-CLASS-415-199	c 05	N80-14107 *	US-PATENT-CLASS-417-395	c 35	N75-19611 *	US-PATENT-CLASS-423-449	c 24	N85-21267 *	#
US-PATENT-CLASS-415-1	c 34	N79-20335 *	US-PATENT-CLASS-417-399	c 44	N83-14693 *	US-PATENT-CLASS-423-539	c 25	N82-28368 *	#
US-PATENT-CLASS-415-1	c 07	N83-31603 *	US-PATENT-CLASS-417-417	c 44	N83-28574 *	US-PATENT-CLASS-423-540	c 25	N82-28368 *	#
US-PATENT-CLASS-415-1	c 37	N85-29282 *	US-PATENT-CLASS-417-462	c 31	N85-21404 *	US-PATENT-CLASS-423-542	c 25	N82-28368 *	#
US-PATENT-CLASS-415-2R	c 44	N82-24639 *	US-PATENT-CLASS-417-470	c 37	N84-28081 *	US-PATENT-CLASS-423-579	c 46	N74-13011 *	#
US-PATENT-CLASS-415-2R	c 44	N84-23018 *	US-PATENT-CLASS-417-471	c 35	N74-15126 *	US-PATENT-CLASS-423-579	c 25	N82-28368 *	#
US-PATENT-CLASS-415-200	c 07	N79-14096 *	US-PATENT-CLASS-417-475	c 35	N74-15126 *	US-PATENT-CLASS-423-581	c 25	N79-10162 *	#
US-PATENT-CLASS-415-200	c 37	N79-18318 *	US-PATENT-CLASS-417-488	c 37	N86-32738 *	US-PATENT-CLASS-423-582	c 26	N78-32229 *	#
US-PATENT-CLASS-415-200	c 37	N85-34402 *	US-PATENT-CLASS-417-50	c 31	N85-21404 *	US-PATENT-CLASS-423-583	c 26	N78-32229 *	#
US-PATENT-CLASS-415-201	c 07	N79-14096 *	US-PATENT-CLASS-417-52	c 15	N71-27084 *	US-PATENT-CLASS-423-600	c 25	N83-33977 *	#
US-PATENT-CLASS-415-2	c 44	N80-21828 *	US-PATENT-CLASS-417-88	c 44	N74-27904 *	US-PATENT-CLASS-423-625	c 15	N73-19457 *	#
US-PATENT-CLASS-415-47	c 07	N83-31603 *	US-PATENT-CLASS-418-113	c 37	N78-32539 *	US-PATENT-CLASS-423-625	c 26	N80-14229 *	#
US-PATENT-CLASS-415-68	c 37	N85-29282 *	US-PATENT-CLASS-418-142	c 37	N82-16408 *	US-PATENT-CLASS-423-644	c 36	N76-18427 *	#
US-PATENT-CLASS-415-9	c 44	N79-14527 *	US-PATENT-CLASS-42-1F	c 11	N72-22247 *	US-PATENT-CLASS-423-648R	c 44	N77-22607 *	#
US-PATENT-CLASS-416-104	c 05	N77-17029 *	US-PATENT-CLASS-42-101	c 44	N86-25874 *	US-PATENT-CLASS-423-648R	c 28	N78-24365 *	#
US-PATENT-CLASS-416-114	c 05	N81-19087 *	US-PATENT-CLASS-42-215	c 44	N76-29704 *	US-PATENT-CLASS-423-648R	c 28	N80-20402 *	#
US-PATENT-CLASS-416-115	c 02	N72-11018 *	US-PATENT-CLASS-420-445	c 26	N82-31505 *	US-PATENT-CLASS-423-648R	c 25	N81-14103 *	#
US-PATENT-CLASS-416-117	c 37	N84-12493 *	US-PATENT-CLASS-420-551	c 26	N82-31505 *	US-PATENT-CLASS-423-648R	c 25	N82-28368 *	#
US-PATENT-CLASS-416-121	c 02	N72-11018 *	US-PATENT-CLASS-420-588	c 26	N82-31505 *	US-PATENT-CLASS-423-649	c 25	N83-29324 *	#

US-PATENT-CLASS-423-650	c 44	N76-18642 *	#	US-PATENT-CLASS-427-250	c 44	N76-28635 *	#	US-PATENT-CLASS-427-419.2	c 26	N83-31795 *	#
US-PATENT-CLASS-423-650	c 44	N76-29700 *	#	US-PATENT-CLASS-427-250	c 37	N78-13436 *	#	US-PATENT-CLASS-427-419.2	c 26	N84-27855 *	#
US-PATENT-CLASS-423-650	c 44	N76-29704 *	#	US-PATENT-CLASS-427-253	c 37	N82-28441 *	#	US-PATENT-CLASS-427-419A	c 34	N78-18355 *	#
US-PATENT-CLASS-423-650	c 28	N77-10636 *	#	US-PATENT-CLASS-427-255	c 27	N78-13436 *	#	US-PATENT-CLASS-427-41	c 27	N78-31233 *	#
US-PATENT-CLASS-423-650	c 28	N80-10374 *	#	US-PATENT-CLASS-427-261	c 44	N78-25527 *	#	US-PATENT-CLASS-427-41	c 74	N78-32854 *	#
US-PATENT-CLASS-423-650	c 28	N81-15119 *	#	US-PATENT-CLASS-427-261	c 44	N79-11472 *	#	US-PATENT-CLASS-427-41	c 27	N79-14214 *	#
US-PATENT-CLASS-424-12	c 25	N79-14169 *	#	US-PATENT-CLASS-427-270	c 27	N76-16229 *	#	US-PATENT-CLASS-427-41	c 27	N79-18052 *	#
US-PATENT-CLASS-424-12	c 51	N80-16715 *	#	US-PATENT-CLASS-427-275	c 27	N76-16229 *	#	US-PATENT-CLASS-427-41	c 27	N80-23452 *	#
US-PATENT-CLASS-424-156	c 25	N83-33977 *	#	US-PATENT-CLASS-427-275	c 27	N76-16229 *	#	US-PATENT-CLASS-427-41	c 27	N84-16940 *	#
US-PATENT-CLASS-424-180	c 52	N75-15270 *	#	US-PATENT-CLASS-427-287	c 27	N76-16229 *	#	US-PATENT-CLASS-427-41	c 26	N86-32550 *	#
US-PATENT-CLASS-424-247	c 52	N81-29764 *	#	US-PATENT-CLASS-427-292	c 24	N79-17916 *	#	US-PATENT-CLASS-427-422	c 24	N85-30027 *	#
US-PATENT-CLASS-424-267	c 52	N81-29764 *	#	US-PATENT-CLASS-427-292	c 24	N83-13172 *	#	US-PATENT-CLASS-427-423	c 34	N78-18355 *	#
US-PATENT-CLASS-424-274	c 52	N81-14613 *	#	US-PATENT-CLASS-427-294	c 27	N79-14214 *	#	US-PATENT-CLASS-427-423	c 27	N82-29453 *	#
US-PATENT-CLASS-424-274	c 52	N81-29764 *	#	US-PATENT-CLASS-427-296	c 26	N85-35267 *	#	US-PATENT-CLASS-427-423	c 27	N83-31855 *	#
US-PATENT-CLASS-424-3	c 51	N77-27677 *	#	US-PATENT-CLASS-427-302	c 26	N84-22734 *	#	US-PATENT-CLASS-427-423	c 31	N83-35177 *	#
US-PATENT-CLASS-425-DIG.43	c 31	N75-13111 *	#	US-PATENT-CLASS-427-302	c 24	N78-32854 *	#	US-PATENT-CLASS-427-423	c 37	N82-24492 *	#
US-PATENT-CLASS-425-10	c 31	N83-35178 *	#	US-PATENT-CLASS-427-306	c 26	N83-13172 *	#	US-PATENT-CLASS-427-426	c 27	N78-15310 *	#
US-PATENT-CLASS-425-113	c 15	N73-13484 *	#	US-PATENT-CLASS-427-318	c 26	N83-31795 *	#	US-PATENT-CLASS-427-426	c 71	N84-16940 *	#
US-PATENT-CLASS-425-128	c 31	N74-32920 *	#	US-PATENT-CLASS-427-322	c 34	N77-18382 *	#	US-PATENT-CLASS-427-427	c 24	N78-24290 *	#
US-PATENT-CLASS-425-133	c 15	N73-13484 *	#	US-PATENT-CLASS-427-322	c 74	N78-32854 *	#	US-PATENT-CLASS-427-427	c 26	N86-32550 *	#
US-PATENT-CLASS-425-176	c 15	N73-13484 *	#	US-PATENT-CLASS-427-322	c 27	N83-34039 *	#	US-PATENT-CLASS-427-429	c 27	N81-14078 *	#
US-PATENT-CLASS-425-288	c 31	N74-32917 *	#	US-PATENT-CLASS-427-327	c 24	N79-17916 *	#	US-PATENT-CLASS-427-436	c 33	N84-16456 *	#
US-PATENT-CLASS-425-35	c 31	N74-32917 *	#	US-PATENT-CLASS-427-328	c 24	N83-34039 *	#	US-PATENT-CLASS-427-437	c 33	N84-16456 *	#
US-PATENT-CLASS-425-378R	c 31	N81-15154 *	#	US-PATENT-CLASS-427-340	c 27	N79-11472 *	#	US-PATENT-CLASS-427-443.2	c 25	N84-12262 *	#
US-PATENT-CLASS-425-405R	c 31	N75-13111 *	#	US-PATENT-CLASS-427-343	c 44	N84-16940 *	#	US-PATENT-CLASS-427-443	c 44	N84-28205 *	#
US-PATENT-CLASS-425-415	c 31	N74-32920 *	#	US-PATENT-CLASS-427-346	c 71	N78-18355 *	#	US-PATENT-CLASS-427-44	c 74	N78-32854 *	#
US-PATENT-CLASS-425-438	c 31	N75-13111 *	#	US-PATENT-CLASS-427-34	c 34	N79-17916 *	#	US-PATENT-CLASS-427-44	c 27	N80-32516 *	#
US-PATENT-CLASS-425-468	c 31	N75-13111 *	#	US-PATENT-CLASS-427-34	c 24	N82-29453 *	#	US-PATENT-CLASS-427-47	c 44	N77-32583 *	#
US-PATENT-CLASS-425-6	c 27	N82-28442 *	#	US-PATENT-CLASS-427-34	c 27	N83-31855 *	#	US-PATENT-CLASS-427-47	c 26	N85-29005 *	#
US-PATENT-CLASS-425-6	c 31	N83-31896 *	#	US-PATENT-CLASS-427-34	c 31	N83-35177 *	#	US-PATENT-CLASS-427-4	c 51	N77-27677 *	#
US-PATENT-CLASS-425-6	c 31	N83-35178 *	#	US-PATENT-CLASS-427-34	c 37	N84-22957 *	#	US-PATENT-CLASS-427-53.1	c 36	N84-22944 *	#
US-PATENT-CLASS-425-6	c 71	N84-28568 *	#	US-PATENT-CLASS-427-34	c 26	N84-27855 *	#	US-PATENT-CLASS-427-53.1	c 37	N84-22957 *	#
US-PATENT-CLASS-425-6	c 26	N86-32551 *	#	US-PATENT-CLASS-427-350	c 24	N79-25142 *	#	US-PATENT-CLASS-427-57	c 71	N84-16940 *	#
US-PATENT-CLASS-425-77	c 15	N72-20446 *	#	US-PATENT-CLASS-427-352	c 27	N83-34039 *	#	US-PATENT-CLASS-427-58	c 33	N84-16456 *	#
US-PATENT-CLASS-425-7	c 31	N83-35176 *	#	US-PATENT-CLASS-427-355	c 27	N79-17916 *	#	US-PATENT-CLASS-427-6	c 71	N84-16940 *	#
US-PATENT-CLASS-427-113	c 44	N76-28635 *	#	US-PATENT-CLASS-427-372.2	c 27	N82-33520 *	#	US-PATENT-CLASS-427-74	c 44	N82-28780 *	#
US-PATENT-CLASS-427-113	c 44	N78-24609 *	#	US-PATENT-CLASS-427-372.2	c 44	N84-28205 *	#	US-PATENT-CLASS-427-75	c 44	N78-25527 *	#
US-PATENT-CLASS-427-113	c 44	N84-28205 *	#	US-PATENT-CLASS-427-372.2	c 24	N79-25142 *	#	US-PATENT-CLASS-427-75	c 44	N79-11468 *	#
US-PATENT-CLASS-427-115	c 25	N82-21268 *	#	US-PATENT-CLASS-427-376.2	c 26	N85-35267 *	#	US-PATENT-CLASS-427-75	c 44	N79-11472 *	#
US-PATENT-CLASS-427-115	c 26	N84-22734 *	#	US-PATENT-CLASS-427-376.6	c 33	N84-16456 *	#	US-PATENT-CLASS-427-75	c 33	N84-16456 *	#
US-PATENT-CLASS-427-115	c 44	N84-28205 *	#	US-PATENT-CLASS-427-376A	c 27	N78-32260 *	#	US-PATENT-CLASS-427-85	c 44	N85-20530 *	#
US-PATENT-CLASS-427-123	c 44	N79-11472 *	#	US-PATENT-CLASS-427-376B	c 24	N79-17916 *	#	US-PATENT-CLASS-427-86	c 44	N76-28635 *	#
US-PATENT-CLASS-427-124	c 37	N78-13436 *	#	US-PATENT-CLASS-427-376C	c 24	N79-22377 *	#	US-PATENT-CLASS-427-86	c 44	N78-24609 *	#
US-PATENT-CLASS-427-125	c 26	N84-22734 *	#	US-PATENT-CLASS-427-376	c 27	N76-22377 *	#	US-PATENT-CLASS-427-88	c 44	N79-11472 *	#
US-PATENT-CLASS-427-125	c 44	N84-28205 *	#	US-PATENT-CLASS-427-376	c 27	N76-23426 *	#	US-PATENT-CLASS-427-88	c 44	N83-13579 *	#
US-PATENT-CLASS-427-126.6	c 26	N84-22734 *	#	US-PATENT-CLASS-427-379	c 27	N76-22377 *	#	US-PATENT-CLASS-427-88	c 33	N84-16456 *	#
US-PATENT-CLASS-427-126	c 37	N78-13436 *	#	US-PATENT-CLASS-427-379	c 27	N76-23426 *	#	US-PATENT-CLASS-427-89	c 44	N83-13579 *	#
US-PATENT-CLASS-427-126	c 44	N79-11472 *	#	US-PATENT-CLASS-427-379	c 27	N78-32260 *	#	US-PATENT-CLASS-427-91	c 44	N83-13579 *	#
US-PATENT-CLASS-427-130	c 44	N77-32583 *	#	US-PATENT-CLASS-427-379	c 27	N81-19296 *	#	US-PATENT-CLASS-427-95	c 25	N79-28253 *	#
US-PATENT-CLASS-427-140	c 27	N82-33520 *	#	US-PATENT-CLASS-427-379	c 24	N83-13171 *	#	US-PATENT-CLASS-427-96	c 33	N84-16456 *	#
US-PATENT-CLASS-427-140	c 24	N83-13172 *	#	US-PATENT-CLASS-427-379	c 44	N84-28205 *	#	US-PATENT-CLASS-428-109	c 27	N76-14264 *	#
US-PATENT-CLASS-427-160	c 34	N77-18382 *	#	US-PATENT-CLASS-427-379	c 24	N85-30027 *	#	US-PATENT-CLASS-428-109	c 33	N79-12331 *	#
US-PATENT-CLASS-427-160	c 44	N78-19599 *	#	US-PATENT-CLASS-427-380	c 27	N76-22377 *	#	US-PATENT-CLASS-428-113	c 24	N81-14000 *	#
US-PATENT-CLASS-427-162	c 12	N76-15189 *	#	US-PATENT-CLASS-427-380	c 27	N76-23426 *	#	US-PATENT-CLASS-428-114	c 24	N81-13999 *	#
US-PATENT-CLASS-427-162	c 27	N86-31727 *	#	US-PATENT-CLASS-427-380	c 27	N78-32260 *	#	US-PATENT-CLASS-428-114	c 24	N81-14000 *	#
US-PATENT-CLASS-427-164	c 27	N78-14164 *	#	US-PATENT-CLASS-427-380	c 44	N84-28205 *	#	US-PATENT-CLASS-428-116	c 24	N78-10214 *	#
US-PATENT-CLASS-427-164	c 27	N78-31233 *	#	US-PATENT-CLASS-427-384	c 26	N85-35267 *	#	US-PATENT-CLASS-428-116	c 24	N78-17149 *	#
US-PATENT-CLASS-427-164	c 74	N78-32854 *	#	US-PATENT-CLASS-427-384	c 24	N83-13171 *	#	US-PATENT-CLASS-428-116	c 24	N86-28131 *	#
US-PATENT-CLASS-427-164	c 27	N80-24437 *	#	US-PATENT-CLASS-427-385.5	c 24	N83-13172 *	#	US-PATENT-CLASS-428-117	c 37	N76-24575 *	#
US-PATENT-CLASS-427-165	c 27	N86-31727 *	#	US-PATENT-CLASS-427-385.5	c 27	N81-14078 *	#	US-PATENT-CLASS-428-117	c 24	N78-15180 *	#
US-PATENT-CLASS-427-178	c 24	N85-30027 *	#	US-PATENT-CLASS-427-385B	c 44	N86-20561 *	#	US-PATENT-CLASS-428-117	c 24	N79-16915 *	#
US-PATENT-CLASS-427-191	c 26	N85-35267 *	#	US-PATENT-CLASS-427-385C	c 44	N78-25530 *	#	US-PATENT-CLASS-428-119	c 24	N79-16915 *	#
US-PATENT-CLASS-427-191	c 26	N86-32550 *	#	US-PATENT-CLASS-427-386	c 24	N78-25530 *	#	US-PATENT-CLASS-428-133	c 37	N79-10422 *	#
US-PATENT-CLASS-427-192	c 26	N86-32550 *	#	US-PATENT-CLASS-427-386	c 74	N78-27180 *	#	US-PATENT-CLASS-428-137	c 24	N79-25142 *	#
US-PATENT-CLASS-427-196	c 27	N76-15310 *	#	US-PATENT-CLASS-427-387	c 74	N78-32854 *	#	US-PATENT-CLASS-428-138	c 24	N78-10214 *	#
US-PATENT-CLASS-427-203	c 27	N76-16229 *	#	US-PATENT-CLASS-427-387	c 24	N83-13171 *	#	US-PATENT-CLASS-428-139	c 23	N81-29160 *	#
US-PATENT-CLASS-427-204	c 27	N76-16229 *	#	US-PATENT-CLASS-427-387	c 24	N83-13172 *	#	US-PATENT-CLASS-428-140	c 24	N81-14000 *	#
US-PATENT-CLASS-427-205	c 27	N76-16229 *	#	US-PATENT-CLASS-427-388.1	c 27	N86-20561 *	#	US-PATENT-CLASS-428-141	c 24	N77-28225 *	#
US-PATENT-CLASS-427-205	c 27	N82-28441 *	#	US-PATENT-CLASS-427-388A	c 24	N78-27180 *	#	US-PATENT-CLASS-428-141	c 27	N82-28440 *	#
US-PATENT-CLASS-427-215	c 27	N78-32260 *	#	US-PATENT-CLASS-427-38	c 74	N78-32854 *	#	US-PATENT-CLASS-428-155	c 37	N84-22957 *	#
US-PATENT-CLASS-427-215	c 24	N83-33950 *	#	US-PATENT-CLASS-427-38	c 26	N80-24437 *	#	US-PATENT-CLASS-428-161	c 24	N77-28225 *	#
US-PATENT-CLASS-427-216	c 33	N84-16456 *	#	US-PATENT-CLASS-427-38	c 27	N86-19458 *	#	US-PATENT-CLASS-428-182	c 18	N84-33450 *	#
US-PATENT-CLASS-427-217	c 33	N84-16456 *	#	US-PATENT-CLASS-427-38	c 27	N82-16238 *	#	US-PATENT-CLASS-428-184	c 18	N84-33450 *	#
US-PATENT-CLASS-427-219.2	c 27	N83-31855 *	#	US-PATENT-CLASS-427-397.7	c 27	N82-33520 *	#	US-PATENT-CLASS-428-189	c 27	N79-12221 *	#
US-PATENT-CLASS-427-221	c 27	N81-19296 *	#	US-PATENT-CLASS-427-397.7	c 26	N85-35267 *	#	US-PATENT-CLASS-428-192	c 27	N82-24339 *	#
US-PATENT-CLASS-427-226	c 33	N84-16456 *	#	US-PATENT-CLASS-427-398A	c 44	N79-11472 *	#	US-PATENT-CLASS-428-193	c 27	N82-24339 *	#
US-PATENT-CLASS-427-226	c 44	N84-28205 *	#	US-PATENT-CLASS-427-399	c 44	N79-11472 *	#	US-PATENT-CLASS-428-202	c 27	N84-14323 *	#
US-PATENT-CLASS-427-228	c 26	N85-35267 *	#	US-PATENT-CLASS-427-399	c 36	N84-22944 *	#	US-PATENT-CLASS-428-212	c 27	N76-14264 *	#
US-PATENT-CLASS-427-229	c 25	N78-10225 *	#	US-PATENT-CLASS-427-399	c 24	N85-21267 *	#	US-PATENT-CLASS-428-212	c 27	N79-12221 *	#
US-PATENT-CLASS-427-230	c 37	N76-31524 *	#	US-PATENT-CLASS-427-39	c 31	N86-32587 *	#	US-PATENT-CLASS-428-212	c 27	N82-29456 *	#
US-PATENT-CLASS-427-240	c 37	N81-33482 *	#	US-PATENT-CLASS-427-400	c 27	N83-34039 *	#	US-PATENT-CLASS-428-218	c 27	N76-14264 *	#
US-PATENT-CLASS-427-241	c 24	N83-33950 *	#	US-PATENT-CLASS-427-402	c 27	N76-22377 *	#	US-PATENT-CLASS-428-218	c 24	N82-29456 *	#
US-PATENT-CLASS-427-243	c 31	N83-35177 *	#	US-PATENT-CLASS-427-402	c 27	N76-23426 *	#	US-PATENT-CLASS-428-218	c 15	N79-26100 *	#
US-PATENT-CLASS-427-244	c 25	N82-21268 *	#	US-PATENT-CLASS-427-405	c 27	N78-18355 *	#	US-PATENT-CLASS-428-221	c 27	N82-24339 *	#
US-PATENT-CLASS-427-245	c 27	N80-23452 *	#	US-PATENT-CLASS-427-405	c 26	N83-13185 *	#	US-PATENT-CLASS-428-242	c 27	N82-24339 *	#
US-PATENT-CLASS-427-246	c 25	N82-21268 *	#	US-PATENT-CLASS-427-407.1	c 27	N83-34039 *	#	US-PATENT-CLASS-428-244	c 27	N83-18908 *	#
US-PATENT-CLASS-427-247	c 31	N83-35177 *	#	US-PATENT-CLASS-427-40	c 27	N78-31233 *	#	US-PATENT-CLASS-428-245	c 27	N82-24339 *	#
US-PATENT-CLASS-427-248.1	c 27										

US-PATENT-CLASS-428-246	c 03	N84-33394 *	#	US-PATENT-CLASS-428-416	c 27	N76-14264 *	#	US-PATENT-CLASS-428-633	c 24	N85-21266 *	#
US-PATENT-CLASS-428-247	c 33	N79-12331 *	#	US-PATENT-CLASS-428-418	c 24	N77-27188 *	#	US-PATENT-CLASS-428-633	c 24	N85-35233 *	#
US-PATENT-CLASS-428-247	c 33	N82-26571 *	#	US-PATENT-CLASS-428-418	c 15	N79-26100 *	#	US-PATENT-CLASS-428-639	c 26	N84-33555 *	#
US-PATENT-CLASS-428-251	c 27	N82-24339 *	#	US-PATENT-CLASS-428-421	c 34	N77-18382 *	#	US-PATENT-CLASS-428-63	c 24	N83-31712 *	#
US-PATENT-CLASS-428-257	c 27	N82-24339 *	#	US-PATENT-CLASS-428-421	c 15	N79-26100 *	#	US-PATENT-CLASS-428-641	c 26	N83-31795 *	#
US-PATENT-CLASS-428-258	c 33	N79-12331 *	#	US-PATENT-CLASS-428-421	c 27	N80-24437 *	#	US-PATENT-CLASS-428-650	c 44	N80-16452 *	#
US-PATENT-CLASS-428-259	c 33	N79-12331 *	#	US-PATENT-CLASS-428-421	c 76	N83-34796 *	#	US-PATENT-CLASS-428-650	c 26	N83-31795 *	#
US-PATENT-CLASS-428-260	c 27	N81-27272 *	#	US-PATENT-CLASS-428-422	c 27	N78-31233 *	#	US-PATENT-CLASS-428-652	c 34	N78-18355 *	#
US-PATENT-CLASS-428-260	c 27	N82-24339 *	#	US-PATENT-CLASS-428-422	c 76	N83-34796 *	#	US-PATENT-CLASS-428-652	c 44	N78-19599 *	#
US-PATENT-CLASS-428-260	c 27	N83-18908 *	#	US-PATENT-CLASS-428-423.5	c 03	N84-33394 *	#	US-PATENT-CLASS-428-656	c 24	N85-21266 *	#
US-PATENT-CLASS-428-260	c 27	N84-14322 *	#	US-PATENT-CLASS-428-425	c 24	N77-28225 *	#	US-PATENT-CLASS-428-656	c 24	N85-35233 *	#
US-PATENT-CLASS-428-260	c 27	N85-34281 *	#	US-PATENT-CLASS-428-426	c 74	N78-15879 *	#	US-PATENT-CLASS-428-658	c 44	N80-16452 *	#
US-PATENT-CLASS-428-263	c 27	N82-16238 *	#	US-PATENT-CLASS-428-426	c 27	N78-32260 *	#	US-PATENT-CLASS-428-667	c 34	N78-18355 *	#
US-PATENT-CLASS-428-264	c 27	N82-16238 *	#	US-PATENT-CLASS-428-427	c 44	N83-34448 *	#	US-PATENT-CLASS-428-667	c 34	N78-19599 *	#
US-PATENT-CLASS-428-265	c 27	N82-16238 *	#	US-PATENT-CLASS-428-427	c 27	N76-22377 *	#	US-PATENT-CLASS-428-675	c 44	N80-16452 *	#
US-PATENT-CLASS-428-265	c 27	N82-24339 *	#	US-PATENT-CLASS-428-428	c 27	N76-23426 *	#	US-PATENT-CLASS-428-678	c 26	N81-25188 *	#
US-PATENT-CLASS-428-266	c 27	N82-16238 *	#	US-PATENT-CLASS-428-428	c 74	N78-15879 *	#	US-PATENT-CLASS-428-678	c 27	N83-31855 *	#
US-PATENT-CLASS-428-267	c 27	N82-16238 *	#	US-PATENT-CLASS-428-428	c 27	N78-32260 *	#	US-PATENT-CLASS-428-678	c 26	N84-33555 *	#
US-PATENT-CLASS-428-272	c 27	N79-12221 *	#	US-PATENT-CLASS-428-428	c 44	N83-34448 *	#	US-PATENT-CLASS-428-678	c 24	N85-21266 *	#
US-PATENT-CLASS-428-280	c 27	N84-33394 *	#	US-PATENT-CLASS-428-428	c 27	N84-33589 *	#	US-PATENT-CLASS-428-678	c 24	N85-35233 *	#
US-PATENT-CLASS-428-280	c 03	N84-33394 *	#	US-PATENT-CLASS-428-432	c 76	N85-33826 *	#	US-PATENT-CLASS-428-679	c 44	N78-19599 *	#
US-PATENT-CLASS-428-282	c 24	N79-25142 *	#	US-PATENT-CLASS-428-432	c 27	N82-32260 *	#	US-PATENT-CLASS-428-679	c 26	N81-25188 *	#
US-PATENT-CLASS-428-283	c 24	N82-29362 *	#	US-PATENT-CLASS-428-446	c 27	N82-29456 *	#	US-PATENT-CLASS-428-679	c 24	N85-21266 *	#
US-PATENT-CLASS-428-283	c 27	N82-29456 *	#	US-PATENT-CLASS-428-446	c 27	N86-19458 *	#	US-PATENT-CLASS-428-679	c 24	N85-35233 *	#
US-PATENT-CLASS-428-284	c 24	N82-29362 *	#	US-PATENT-CLASS-428-447	c 27	N76-14264 *	#	US-PATENT-CLASS-428-680	c 44	N80-16452 *	#
US-PATENT-CLASS-428-285	c 27	N79-12221 *	#	US-PATENT-CLASS-428-447	c 27	N76-16230 *	#	US-PATENT-CLASS-428-680	c 26	N81-25188 *	#
US-PATENT-CLASS-428-286	c 27	N79-12221 *	#	US-PATENT-CLASS-428-447	c 27	N78-31233 *	#	US-PATENT-CLASS-428-680	c 26	N83-31795 *	#
US-PATENT-CLASS-428-286	c 24	N82-29362 *	#	US-PATENT-CLASS-428-447	c 74	N78-32854 *	#	US-PATENT-CLASS-428-680	c 24	N85-21266 *	#
US-PATENT-CLASS-428-287	c 24	N82-29362 *	#	US-PATENT-CLASS-428-447	c 27	N79-12221 *	#	US-PATENT-CLASS-428-680	c 24	N85-35233 *	#
US-PATENT-CLASS-428-287	c 03	N84-33394 *	#	US-PATENT-CLASS-428-447	c 27	N79-18052 *	#	US-PATENT-CLASS-428-681	c 24	N85-21266 *	#
US-PATENT-CLASS-428-288	c 24	N82-29362 *	#	US-PATENT-CLASS-428-447	c 24	N79-25142 *	#	US-PATENT-CLASS-428-681	c 24	N85-35233 *	#
US-PATENT-CLASS-428-289	c 27	N82-29456 *	#	US-PATENT-CLASS-428-447	c 27	N82-24339 *	#	US-PATENT-CLASS-428-682	c 24	N85-21266 *	#
US-PATENT-CLASS-428-290	c 24	N78-15180 *	#	US-PATENT-CLASS-428-448	c 27	N82-24339 *	#	US-PATENT-CLASS-428-682	c 24	N85-35233 *	#
US-PATENT-CLASS-428-290	c 24	N79-25142 *	#	US-PATENT-CLASS-428-450	c 27	N76-16229 *	#	US-PATENT-CLASS-428-683	c 24	N85-21266 *	#
US-PATENT-CLASS-428-294	c 24	N78-17150 *	#	US-PATENT-CLASS-428-450	c 27	N76-22377 *	#	US-PATENT-CLASS-428-684	c 24	N85-21266 *	#
US-PATENT-CLASS-428-294	c 76	N83-34796 *	#	US-PATENT-CLASS-428-450	c 27	N76-23426 *	#	US-PATENT-CLASS-428-688	c 76	N85-33826 *	#
US-PATENT-CLASS-428-301	c 24	N77-27188 *	#	US-PATENT-CLASS-428-450	c 27	N79-12221 *	#	US-PATENT-CLASS-428-688	c 26	N85-35267 *	#
US-PATENT-CLASS-428-302	c 24	N78-17150 *	#	US-PATENT-CLASS-428-450	c 26	N83-31795 *	#	US-PATENT-CLASS-428-702	c 27	N86-19458 *	#
US-PATENT-CLASS-428-303	c 07	N76-15310 *	#	US-PATENT-CLASS-428-451	c 27	N79-18052 *	#	US-PATENT-CLASS-428-704	c 26	N85-35267 *	#
US-PATENT-CLASS-428-304.4	c 03	N84-33394 *	#	US-PATENT-CLASS-428-457	c 27	N76-16229 *	#	US-PATENT-CLASS-428-71	c 24	N78-15180 *	#
US-PATENT-CLASS-428-307.7	c 27	N82-29456 *	#	US-PATENT-CLASS-428-457	c 24	N77-27188 *	#	US-PATENT-CLASS-428-71	c 03	N84-33394 *	#
US-PATENT-CLASS-428-311.5	c 27	N82-29456 *	#	US-PATENT-CLASS-428-457	c 26	N77-28225 *	#	US-PATENT-CLASS-428-73	c 24	N78-10214 *	#
US-PATENT-CLASS-428-312.6	c 27	N82-29456 *	#	US-PATENT-CLASS-428-457	c 24	N82-30371 *	#	US-PATENT-CLASS-428-73	c 24	N78-15180 *	#
US-PATENT-CLASS-428-312.6	c 44	N83-34448 *	#	US-PATENT-CLASS-428-458	c 24	N77-28225 *	#	US-PATENT-CLASS-428-73	c 03	N79-16915 *	#
US-PATENT-CLASS-428-312	c 27	N78-32260 *	#	US-PATENT-CLASS-428-458	c 24	N79-16915 *	#	US-PATENT-CLASS-428-76	c 24	N84-33394 *	#
US-PATENT-CLASS-428-313	c 24	N78-27180 *	#	US-PATENT-CLASS-428-458	c 27	N86-20561 *	#	US-PATENT-CLASS-428-77	c 27	N76-14264 *	#
US-PATENT-CLASS-428-317.9	c 27	N82-29456 *	#	US-PATENT-CLASS-428-458	c 34	N77-18382 *	#	US-PATENT-CLASS-428-77	c 27	N79-12221 *	#
US-PATENT-CLASS-428-319.1	c 03	N84-33394 *	#	US-PATENT-CLASS-428-461	c 27	N82-24340 *	#	US-PATENT-CLASS-428-78	c 27	N84-14323 *	#
US-PATENT-CLASS-428-325	c 27	N78-32260 *	#	US-PATENT-CLASS-428-462	c 27	N76-16229 *	#	US-PATENT-CLASS-428-902	c 24	N77-27188 *	#
US-PATENT-CLASS-428-325	c 27	N82-29456 *	#	US-PATENT-CLASS-428-466	c 27	N76-16229 *	#	US-PATENT-CLASS-428-902	c 24	N78-10214 *	#
US-PATENT-CLASS-428-325	c 44	N83-34448 *	#	US-PATENT-CLASS-428-469	c 26	N83-31795 *	#	US-PATENT-CLASS-428-902	c 24	N78-17149 *	#
US-PATENT-CLASS-428-328	c 24	N77-27188 *	#	US-PATENT-CLASS-428-469	c 26	N81-25188 *	#	US-PATENT-CLASS-428-902	c 24	N81-14000 *	#
US-PATENT-CLASS-428-331	c 27	N78-32260 *	#	US-PATENT-CLASS-428-471	c 26	N82-30371 *	#	US-PATENT-CLASS-428-902	c 31	N81-25258 *	#
US-PATENT-CLASS-428-331	c 27	N83-18908 *	#	US-PATENT-CLASS-428-472	c 26	N81-14078 *	#	US-PATENT-CLASS-428-902	c 27	N81-27272 *	#
US-PATENT-CLASS-428-332	c 27	N76-22377 *	#	US-PATENT-CLASS-428-473.5	c 27	N81-29229 *	#	US-PATENT-CLASS-428-902	c 27	N83-18908 *	#
US-PATENT-CLASS-428-332	c 27	N76-23426 *	#	US-PATENT-CLASS-428-473.5	c 27	N84-14322 *	#	US-PATENT-CLASS-428-902	c 24	N83-33950 *	#
US-PATENT-CLASS-428-332	c 24	N78-27180 *	#	US-PATENT-CLASS-428-473.5	c 27	N86-19458 *	#	US-PATENT-CLASS-428-902	c 27	N84-14322 *	#
US-PATENT-CLASS-428-332	c 27	N79-12221 *	#	US-PATENT-CLASS-428-473.5	c 27	N86-20561 *	#	US-PATENT-CLASS-428-902	c 27	N84-22745 *	#
US-PATENT-CLASS-428-332	c 24	N79-25142 *	#	US-PATENT-CLASS-428-473.5	c 24	N86-25416 *	#	US-PATENT-CLASS-428-903	c 24	N83-33950 *	#
US-PATENT-CLASS-428-332	c 27	N82-24340 *	#	US-PATENT-CLASS-428-473.5	c 27	N86-31726 *	#	US-PATENT-CLASS-428-911	c 27	N76-16230 *	#
US-PATENT-CLASS-428-334	c 74	N78-15879 *	#	US-PATENT-CLASS-428-473.5	c 27	N86-31727 *	#	US-PATENT-CLASS-428-911	c 24	N77-27188 *	#
US-PATENT-CLASS-428-336	c 74	N78-15879 *	#	US-PATENT-CLASS-428-474	c 34	N77-18382 *	#	US-PATENT-CLASS-428-913	c 34	N78-25350 *	#
US-PATENT-CLASS-428-336	c 27	N86-31727 *	#	US-PATENT-CLASS-428-474.4	c 24	N86-25416 *	#	US-PATENT-CLASS-428-913	c 27	N83-18908 *	#
US-PATENT-CLASS-428-339	c 27	N82-24340 *	#	US-PATENT-CLASS-428-474.7	c 27	N79-33316 *	#	US-PATENT-CLASS-428-913	c 76	N85-33826 *	#
US-PATENT-CLASS-428-341	c 27	N78-32260 *	#	US-PATENT-CLASS-428-480	c 27	N80-24437 *	#	US-PATENT-CLASS-428-920	c 27	N76-16230 *	#
US-PATENT-CLASS-428-347	c 27	N84-14323 *	#	US-PATENT-CLASS-428-480	c 24	N86-25416 *	#	US-PATENT-CLASS-428-920	c 27	N76-22377 *	#
US-PATENT-CLASS-428-35	c 34	N77-18382 *	#	US-PATENT-CLASS-428-493	c 27	N81-14000 *	#	US-PATENT-CLASS-428-920	c 27	N76-23426 *	#
US-PATENT-CLASS-428-366	c 24	N79-24062 *	#	US-PATENT-CLASS-428-499	c 27	N82-24340 *	#	US-PATENT-CLASS-428-920	c 24	N78-15180 *	#
US-PATENT-CLASS-428-367	c 27	N81-27272 *	#	US-PATENT-CLASS-428-499	c 27	N82-24339 *	#	US-PATENT-CLASS-428-920	c 27	N78-32260 *	#
US-PATENT-CLASS-428-367	c 24	N83-33950 *	#	US-PATENT-CLASS-428-499	c 27	N82-29456 *	#	US-PATENT-CLASS-428-920	c 27	N79-12221 *	#
US-PATENT-CLASS-428-367	c 27	N84-14322 *	#	US-PATENT-CLASS-428-500	c 27	N80-32516 *	#	US-PATENT-CLASS-428-920	c 24	N79-25142 *	#
US-PATENT-CLASS-428-368	c 24	N77-27188 *	#	US-PATENT-CLASS-428-515	c 27	N78-31233 *	#	US-PATENT-CLASS-428-920	c 15	N79-26100 *	#
US-PATENT-CLASS-428-368	c 27	N83-18908 *	#	US-PATENT-CLASS-428-522	c 27	N78-14164 *	#	US-PATENT-CLASS-428-920	c 27	N81-27272 *	#
US-PATENT-CLASS-428-370	c 27	N84-22745 *	#	US-PATENT-CLASS-428-523	c 27	N78-31233 *	#	US-PATENT-CLASS-428-920	c 27	N83-18908 *	#
US-PATENT-CLASS-428-375	c 24	N79-16915 *	#	US-PATENT-CLASS-428-528	c 24	N81-13999 *	#	US-PATENT-CLASS-428-920	c 27	N84-14322 *	#
US-PATENT-CLASS-428-375	c 24	N83-33950 *	#	US-PATENT-CLASS-428-538	c 27	N76-22377 *	#	US-PATENT-CLASS-428-920	c 27	N84-22745 *	#
US-PATENT-CLASS-428-392	c 24	N83-33950 *	#	US-PATENT-CLASS-428-538	c 27	N76-23426 *	#	US-PATENT-CLASS-428-921	c 27	N76-16230 *	#
US-PATENT-CLASS-428-406	c 27	N78-32260 *	#	US-PATENT-CLASS-428-538	c 27	N78-31233 *	#	US-PATENT-CLASS-428-921	c 24	N78-27180 *	#
US-PATENT-CLASS-428-406	c 27	N81-27272 *	#	US-PATENT-CLASS-428-539	c 27	N76-16229 *	#	US-PATENT-CLASS-428-921	c 24	N81-13999 *	#
US-PATENT-CLASS-428-408	c 27	N84-14322 *	#	US-PATENT-CLASS-428-541	c 24	N81-13999 *	#	US-PATENT-CLASS-428-921	c 03	N84-33394 *	#
US-PATENT-CLASS-428-408	c 27	N84-22745 *	#	US-PATENT-CLASS-428-541	c 26	N84-33555 *	#	US-PATENT-CLASS-428-921	c 24	N86-28131 *	#
US-PATENT-CLASS-428-408	c 27	N85-34281 *	#	US-PATENT-CLASS-428-541	c 24	N82-24296 *	#	US-PATENT-CLASS-428-921	c 27	N78-14164 *	#
US-PATENT-CLASS-428-408	c 24	N86-28131 *	#	US-PATENT-CLASS-428-541	c 24	N84-12114 *	#	US-PATENT-CLASS-428-938	c 27	N82-28441 *	#
US-PATENT-CLASS-428-408	c 27	N84-14323 *	#	US-PATENT-CLASS-428-541	c 24	N82-24296 *	#	US-PATENT-CLASS-428-938	c 34	N78-25350 *	#
US-PATENT-CLASS-428-410	c 23	N86-19376 *	#	US-PATENT-CLASS-428-541	c 18	N84-33450 *	#	US-PATENT-CLASS-428-941	c 27	N82-28441 *	#
US-PATENT-CLASS-428-411	c 27	N78-14164 *	#	US-PATENT-CLASS-428-541	c 24	N82-32417 *	#	US-PATENT-CLASS-428-94	c 34	N78-25350 *	#
US-PATENT-CLASS-428-411	c 27	N78-31233 *	#	US-PATENT-CLASS-428-604	c 24	N82-32417 *	#	US-PATENT-CLASS-428-96	c 34	N78-25350 *	



US-PATENT-CLASS-429-107	c 33	N80-20487 *	US-PATENT-CLASS-434-35	c 09	N85-19990 *	US-PATENT-CLASS-48-117	c 28	N80-10374 *
US-PATENT-CLASS-429-107	c 44	N83-27344 *	US-PATENT-CLASS-434-38	c 36	N83-34304 *	US-PATENT-CLASS-48-107-R	c 25	N86-25428 *
US-PATENT-CLASS-429-109	c 33	N80-20487 *	US-PATENT-CLASS-434-403	c 31	N83-34073 *	US-PATENT-CLASS-48-107R	c 44	N76-29704 *
US-PATENT-CLASS-429-109	c 44	N83-27344 *	US-PATENT-CLASS-434-42	c 09	N82-24212 *	US-PATENT-CLASS-48-107R	c 44	N77-10636 *
US-PATENT-CLASS-429-109	c 44	N86-19721 *	US-PATENT-CLASS-434-43	c 09	N82-24212 *	US-PATENT-CLASS-48-212	c 44	N77-10636 *
US-PATENT-CLASS-429-111	c 25	N84-12262 *	US-PATENT-CLASS-434-49	c 09	N85-19990 *	US-PATENT-CLASS-48-215	c 44	N76-29700 *
US-PATENT-CLASS-429-111	c 44	N84-23019 *	US-PATENT-CLASS-434-4	c 36	N83-34304 *	US-PATENT-CLASS-48-61	c 44	N77-10636 *
US-PATENT-CLASS-429-120	c 44	N81-24521 *	US-PATENT-CLASS-434-4	c 35	N86-32697 *	US-PATENT-CLASS-48-61	c 28	N80-10374 *
US-PATENT-CLASS-429-139	c 27	N80-32616 *	US-PATENT-CLASS-434-59	c 54	N81-27806 *	US-PATENT-CLASS-48-63	c 44	N76-18642 *
US-PATENT-CLASS-429-139	c 27	N81-24257 *	US-PATENT-CLASS-434-68	c 31	N83-34073 *	US-PATENT-CLASS-48-75	c 44	N76-18642 *
US-PATENT-CLASS-429-13	c 44	N79-10513 *	US-PATENT-CLASS-435-160	c 23	N85-35227 *	US-PATENT-CLASS-48-89	c 44	N82-16475 *
US-PATENT-CLASS-429-144	c 44	N82-29708 *	US-PATENT-CLASS-435-289	c 51	N80-27067 *	US-PATENT-CLASS-48-95	c 44	N76-18642 *
US-PATENT-CLASS-429-144	c 44	N83-32176 *	US-PATENT-CLASS-435-289	c 51	N83-27569 *	US-PATENT-CLASS-48-95	c 44	N76-29700 *
US-PATENT-CLASS-429-15	c 44	N79-28474 *	US-PATENT-CLASS-435-290	c 51	N80-27067 *	US-PATENT-CLASS-48-99	c 44	N82-16475 *
US-PATENT-CLASS-429-15	c 44	N86-19721 *	US-PATENT-CLASS-435-291	c 51	N80-27067 *	US-PATENT-CLASS-49-DIG.1	c 34	N76-25350 *
US-PATENT-CLASS-429-160	c 44	N81-24521 *	US-PATENT-CLASS-435-291	c 51	N81-26868 *	US-PATENT-CLASS-49-171	c 31	N81-19343 *
US-PATENT-CLASS-429-164	c 44	N81-24521 *	US-PATENT-CLASS-435-291	c 35	N82-28904 *	US-PATENT-CLASS-49-479	c 34	N76-25350 *
US-PATENT-CLASS-429-190	c 44	N77-22806 *	US-PATENT-CLASS-435-291	c 51	N83-27569 *	US-PATENT-CLASS-49-485	c 34	N76-25350 *
US-PATENT-CLASS-429-193	c 44	N82-29710 *	US-PATENT-CLASS-435-311	c 51	N80-27067 *	US-PATENT-CLASS-49-68	c 18	N74-22136 *
US-PATENT-CLASS-429-19	c 44	N86-19721 *	US-PATENT-CLASS-435-316	c 51	N80-27067 *	US-PATENT-CLASS-5-345	c 05	N70-33285 *
US-PATENT-CLASS-429-206	c 25	N83-13188 *	US-PATENT-CLASS-435-32	c 51	N80-27067 *	US-PATENT-CLASS-5-459	c 03	N84-33394 *
US-PATENT-CLASS-429-206	c 33	N84-14422 *	US-PATENT-CLASS-435-34	c 51	N80-16714 *	US-PATENT-CLASS-5-69	c 05	N72-11085 *
US-PATENT-CLASS-429-206	c 33	N85-29144 *	US-PATENT-CLASS-435-34	c 51	N80-27067 *	US-PATENT-CLASS-5-82	c 05	N71-23159 *
US-PATENT-CLASS-429-223	c 26	N84-22734 *	US-PATENT-CLASS-435-34	c 51	N81-26868 *	US-PATENT-CLASS-51-170	c 15	N71-26134 *
US-PATENT-CLASS-429-229	c 33	N84-14422 *	US-PATENT-CLASS-435-34	c 35	N82-28604 *	US-PATENT-CLASS-51-216	c 15	N72-20444 *
US-PATENT-CLASS-429-234	c 28	N84-22734 *	US-PATENT-CLASS-435-34	c 51	N83-27569 *	US-PATENT-CLASS-51-225	c 37	N74-27905 *
US-PATENT-CLASS-429-23	c 44	N77-14581 *	US-PATENT-CLASS-435-34	c 51	N80-28849 *	US-PATENT-CLASS-51-234	c 37	N74-27905 *
US-PATENT-CLASS-429-249	c 27	N81-24257 *	US-PATENT-CLASS-435-38	c 51	N80-27067 *	US-PATENT-CLASS-51-235	c 37	N76-17383 *
US-PATENT-CLASS-429-249	c 23	N81-29160 *	US-PATENT-CLASS-435-38	c 51	N83-27569 *	US-PATENT-CLASS-51-235	c 76	N80-18951 *
US-PATENT-CLASS-429-249	c 33	N85-29144 *	US-PATENT-CLASS-435-38	c 51	N80-27067 *	US-PATENT-CLASS-51-277	c 74	N80-24149 *
US-PATENT-CLASS-429-251	c 44	N82-29708 *	US-PATENT-CLASS-435-39	c 51	N82-28604 *	US-PATENT-CLASS-51-283R	c 46	N74-23069 *
US-PATENT-CLASS-429-251	c 44	N83-32176 *	US-PATENT-CLASS-435-39	c 35	N83-27569 *	US-PATENT-CLASS-51-320	c 15	N72-20444 *
US-PATENT-CLASS-429-253	c 44	N79-25481 *	US-PATENT-CLASS-435-39	c 51	N83-28849 *	US-PATENT-CLASS-51-323	c 15	N72-20444 *
US-PATENT-CLASS-429-253	c 27	N81-24257 *	US-PATENT-CLASS-435-39	c 51	N80-27067 *	US-PATENT-CLASS-51-57	c 15	N71-22705 *
US-PATENT-CLASS-429-253	c 23	N81-29160 *	US-PATENT-CLASS-435-39	c 51	N83-27569 *	US-PATENT-CLASS-51-73R	c 37	N85-21650 *
US-PATENT-CLASS-429-253	c 25	N83-13188 *	US-PATENT-CLASS-435-39	c 51	N83-28849 *	US-PATENT-CLASS-51-97R	c 37	N74-27905 *
US-PATENT-CLASS-429-254	c 44	N76-25530 *	US-PATENT-CLASS-435-3	c 51	N81-26868 *	US-PATENT-CLASS-52-648	c 37	N86-25789 *
US-PATENT-CLASS-429-254	c 44	N82-29708 *	US-PATENT-CLASS-435-5	c 51	N83-28849 *	US-PATENT-CLASS-52-DIG.10	c 18	N72-25540 *
US-PATENT-CLASS-429-254	c 44	N83-32176 *	US-PATENT-CLASS-435-807	c 51	N85-35227 *	US-PATENT-CLASS-52-DIG.10	c 18	N72-25541 *
US-PATENT-CLASS-429-27	c 27	N81-24257 *	US-PATENT-CLASS-435-842	c 23	N86-19413 *	US-PATENT-CLASS-52-108	c 15	N72-18477 *
US-PATENT-CLASS-429-27	c 23	N81-29160 *	US-PATENT-CLASS-435-8	c 51	N85-29213 *	US-PATENT-CLASS-52-109	c 31	N81-27323 *
US-PATENT-CLASS-429-27	c 44	N86-25874 *	US-PATENT-CLASS-436-155	c 25	N85-35235 *	US-PATENT-CLASS-52-110	c 37	N73-32749 *
US-PATENT-CLASS-429-28	c 27	N81-24257 *	US-PATENT-CLASS-436-2	c 35	N78-31527 *	US-PATENT-CLASS-52-111	c 31	N81-27324 *
US-PATENT-CLASS-429-28	c 23	N81-29160 *	US-PATENT-CLASS-44-1SR	c 25	N81-33246 *	US-PATENT-CLASS-52-111	c 37	N86-25789 *
US-PATENT-CLASS-429-33	c 44	N79-17313 *	US-PATENT-CLASS-44-1SR	c 25	N82-29371 *	US-PATENT-CLASS-52-111	c 37	N86-32737 *
US-PATENT-CLASS-429-33	c 44	N82-29710 *	US-PATENT-CLASS-44-1SR	c 25	N83-31743 *	US-PATENT-CLASS-52-117	c 44	N77-32582 *
US-PATENT-CLASS-429-34	c 44	N77-14581 *	US-PATENT-CLASS-44-1SR	c 25	N78-31527 *	US-PATENT-CLASS-52-127.7	c 37	N85-30335 *
US-PATENT-CLASS-429-34	c 44	N83-27344 *	US-PATENT-CLASS-44-1SR	c 25	N81-17261 *	US-PATENT-CLASS-52-127	c 15	N71-21531 *
US-PATENT-CLASS-429-40	c 44	N82-29710 *	US-PATENT-CLASS-44-2	c 25	N81-15192 *	US-PATENT-CLASS-52-169	c 15	N72-25454 *
US-PATENT-CLASS-429-40	c 44	N83-27344 *	US-PATENT-CLASS-44-2	c 25	N79-11152 *	US-PATENT-CLASS-52-171	c 11	N73-12265 *
US-PATENT-CLASS-429-41	c 44	N79-10513 *	US-PATENT-CLASS-44-51	c 27	N81-14103 *	US-PATENT-CLASS-52-173R	c 74	N85-29750 *
US-PATENT-CLASS-429-42	c 44	N79-10513 *	US-PATENT-CLASS-44-7R	c 28	N71-23499 *	US-PATENT-CLASS-52-173	c 15	N72-25454 *
US-PATENT-CLASS-429-44	c 44	N84-28205 *	US-PATENT-CLASS-44-77	c 06	N85-33469 *	US-PATENT-CLASS-52-1	c 15	N72-26496 *
US-PATENT-CLASS-429-51	c 44	N86-19721 *	US-PATENT-CLASS-445-35	c 37	N81-15192 *	US-PATENT-CLASS-52-232	c 37	N81-14317 *
US-PATENT-CLASS-429-57	c 44	N86-25874 *	US-PATENT-CLASS-445-102	c 33	N82-15381 *	US-PATENT-CLASS-52-236	c 39	N76-31562 *
US-PATENT-CLASS-429-58	c 35	N85-21596 *	US-PATENT-CLASS-455-139	c 35	N82-29539 *	US-PATENT-CLASS-52-249	c 33	N71-25351 *
US-PATENT-CLASS-429-94	c 44	N81-24521 *	US-PATENT-CLASS-455-202	c 33	N84-27952 *	US-PATENT-CLASS-52-272	c 31	N71-24035 *
US-PATENT-CLASS-430-17	c 35	N82-11432 *	US-PATENT-CLASS-455-202	c 32	N82-29539 *	US-PATENT-CLASS-52-284	c 32	N73-13921 *
US-PATENT-CLASS-430-271	c 27	N81-25209 *	US-PATENT-CLASS-455-208	c 33	N84-27952 *	US-PATENT-CLASS-52-2	c 32	N71-21025 *
US-PATENT-CLASS-430-325	c 27	N81-25209 *	US-PATENT-CLASS-455-208	c 32	N82-29539 *	US-PATENT-CLASS-52-2	c 44	N77-32583 *
US-PATENT-CLASS-430-329	c 27	N81-25209 *	US-PATENT-CLASS-455-234	c 33	N84-27952 *	US-PATENT-CLASS-52-309.1	c 31	N81-25258 *
US-PATENT-CLASS-430-330	c 27	N81-25209 *	US-PATENT-CLASS-455-260	c 32	N81-14186 *	US-PATENT-CLASS-52-3	c 31	N71-16080 *
US-PATENT-CLASS-430-372	c 35	N82-11432 *	US-PATENT-CLASS-455-265	c 32	N82-15381 *	US-PATENT-CLASS-52-404	c 33	N71-25351 *
US-PATENT-CLASS-431-10	c 34	N78-27357 *	US-PATENT-CLASS-455-278	c 32	N81-29308 *	US-PATENT-CLASS-52-404	c 16	N84-22601 *
US-PATENT-CLASS-431-10	c 25	N79-11151 *	US-PATENT-CLASS-455-306	c 33	N82-29539 *	US-PATENT-CLASS-52-506	c 16	N84-22601 *
US-PATENT-CLASS-431-116	c 44	N77-10636 *	US-PATENT-CLASS-455-51	c 32	N81-14186 *	US-PATENT-CLASS-52-506	c 37	N85-30335 *
US-PATENT-CLASS-431-11	c 44	N77-10636 *	US-PATENT-CLASS-455-60	c 35	N82-15381 *	US-PATENT-CLASS-52-51	c 44	N77-31601 *
US-PATENT-CLASS-431-158	c 25	N78-10224 *	US-PATENT-CLASS-455-610	c 74	N82-19029 *	US-PATENT-CLASS-52-573	c 15	N72-28496 *
US-PATENT-CLASS-431-162	c 44	N77-10636 *	US-PATENT-CLASS-455-612	c 74	N82-19029 *	US-PATENT-CLASS-52-594	c 15	N72-25454 *
US-PATENT-CLASS-431-163	c 44	N76-29704 *	US-PATENT-CLASS-455-615	c 74	N83-29032 *	US-PATENT-CLASS-52-594	c 32	N73-13921 *
US-PATENT-CLASS-431-170	c 44	N77-10636 *	US-PATENT-CLASS-455-615	c 74	N82-19029 *	US-PATENT-CLASS-52-632	c 31	N81-27324 *
US-PATENT-CLASS-431-173	c 23	N73-30665 *	US-PATENT-CLASS-455-619	c 74	N81-14186 *	US-PATENT-CLASS-52-632	c 31	N86-19479 *
US-PATENT-CLASS-431-202	c 25	N84-16276 *	US-PATENT-CLASS-455-71	c 32	N81-14186 *	US-PATENT-CLASS-52-632	c 37	N86-32737 *
US-PATENT-CLASS-431-208	c 25	N74-33378 *	US-PATENT-CLASS-455-73	c 32	N85-29118 *	US-PATENT-CLASS-52-637	c 39	N76-31562 *
US-PATENT-CLASS-431-210	c 44	N76-29704 *	US-PATENT-CLASS-467-28	c 39	N80-10507 *	US-PATENT-CLASS-52-645	c 31	N86-19479 *
US-PATENT-CLASS-431-2	c 07	N81-29129 *	US-PATENT-CLASS-47-1.2	c 51	N75-25503 *	US-PATENT-CLASS-52-645	c 37	N86-25789 *
US-PATENT-CLASS-431-328	c 34	N78-27357 *	US-PATENT-CLASS-47-1.4	c 31	N73-32750 *	US-PATENT-CLASS-52-645	c 37	N86-32737 *
US-PATENT-CLASS-431-352	c 28	N71-28915 *	US-PATENT-CLASS-47-17	c 31	N73-32750 *	US-PATENT-CLASS-52-646	c 31	N73-32749 *
US-PATENT-CLASS-431-352	c 25	N78-10224 *	US-PATENT-CLASS-47-26	c 37	N83-26078 *	US-PATENT-CLASS-52-646	c 31	N86-19479 *
US-PATENT-CLASS-431-41	c 44	N77-10636 *	US-PATENT-CLASS-47-39	c 51	N75-25503 *	US-PATENT-CLASS-52-646	c 37	N86-32737 *
US-PATENT-CLASS-431-4	c 44	N76-29704 *	US-PATENT-CLASS-47-58	c 51	N75-25503 *	US-PATENT-CLASS-52-648	c 11	N72-25287 *
US-PATENT-CLASS-431-7	c 34	N78-27357 *	US-PATENT-CLASS-47-58	c 45	N84-12654 *	US-PATENT-CLASS-52-648	c 39	N76-31562 *
US-PATENT-CLASS-431-9	c 23	N73-30665 *	US-PATENT-CLASS-47A-205	c 37	N80-32717 *	US-PATENT-CLASS-52-648	c 31	N81-25258 *
US-PATENT-CLASS-432-18	c 35	N86-20750 *	US-PATENT-CLASS-48-DIG.8	c 28	N80-10374 *	US-PATENT-CLASS-52-648	c 31	N86-19479 *
US-PATENT-CLASS-432-223	c 25	N79-11151 *	US-PATENT-CLASS-48-10.3	c 28	N80-10374 *	US-PATENT-CLASS-52-651	c 39	N73-32749 *
US-PATENT-CLASS-432-227	c 35	N83-24828 *	US-PATENT-CLASS-48-102A	c 28	N80-10374 *	US-PATENT-CLASS-52-655	c 11	N72-25287 *
US-PATENT-CLASS-432-264	c 33	N81-19389 *	US-PATENT-CLASS-48-107	c 28	N80-10374 *	US-PATENT-CLASS-52-705	c 37	N76-19437 *
US-PATENT-CLASS-432-29	c 25	N79-11151 *	US-PATENT-CLASS-48-116	c 44	N76-18642 *	US-PATENT-CLASS-52-71	c 18	N75-27040 *
US-PATENT-CLASS-432-58	c 35	N83-24828 *	US-PATENT-CLASS-48-116	c 44	N77-10636 *	US-PATENT-CLASS-52-726	c 39	N76-31562 *
US-PATENT-CLASS-433-118	c 52	N82-29862 *	US-PATENT-CLASS-48-117	c 44	N76-18642 *	US-PATENT-CLASS-52-743	c 31	N81-25258 *
US-PATENT-CLASS-433-125	c 52	N82-29862 *	US-PATENT-CLASS-48-117	c 44	N77-10636 *			
US-PATENT-CLASS-433-86	c 52	N82-29862 *						
US-PATENT-CLASS-434-242	c 09	N85-19990 *						
US-PATENT-CLASS-434-243	c 09	N85-19990 *						
US-PATENT-CLASS-434-2	c 32	N84-27951 *						



US-PATENT-CLASS-52-745	c 39	N76-31562 *	#	US-PATENT-CLASS-525-484	c 24	N84-34571 *	#	US-PATENT-CLASS-528-183	c 27	N84-22746 *	#
US-PATENT-CLASS-52-745	c 31	N81-27323 *	#	US-PATENT-CLASS-525-4	c 25	N80-23383 *	#	US-PATENT-CLASS-528-183	c 27	N85-20123 *	#
US-PATENT-CLASS-52-745	c 37	N85-30335 *	#	US-PATENT-CLASS-525-527	c 24	N86-19380 *	#	US-PATENT-CLASS-528-183	c 27	N86-29039 *	#
US-PATENT-CLASS-52-749	c 39	N76-31562 *	#	US-PATENT-CLASS-525-532	c 23	N85-28973 *	#	US-PATENT-CLASS-528-185	c 27	N84-22749 *	#
US-PATENT-CLASS-52-758F	c 37	N76-19437 *	#	US-PATENT-CLASS-525-534	c 27	N84-22747 *	#	US-PATENT-CLASS-528-185	c 27	N85-21348 *	#
US-PATENT-CLASS-52-806	c 24	N84-11214 *	#	US-PATENT-CLASS-525-534	c 23	N85-28973 *	#	US-PATENT-CLASS-528-185	c 27	N86-19456 *	#
US-PATENT-CLASS-52-808	c 24	N84-11214 *	#	US-PATENT-CLASS-525-535	c 27	N86-27450 *	#	US-PATENT-CLASS-528-186	c 27	N85-21348 *	#
US-PATENT-CLASS-52-80	c 18	N72-25540 *	#	US-PATENT-CLASS-525-535	c 27	N84-22747 *	#	US-PATENT-CLASS-528-187	c 27	N85-21348 *	#
US-PATENT-CLASS-52-80	c 18	N72-25541 *	#	US-PATENT-CLASS-525-535	c 27	N86-27450 *	#	US-PATENT-CLASS-528-192	c 27	N85-20123 *	#
US-PATENT-CLASS-52-80	c 31	N73-32749 *	#	US-PATENT-CLASS-525-536	c 27	N84-22747 *	#	US-PATENT-CLASS-528-207	c 27	N80-16158 *	#
US-PATENT-CLASS-52-814	c 18	N84-33450 *	#	US-PATENT-CLASS-525-561	c 23	N81-29160 *	#	US-PATENT-CLASS-528-207	c 27	N82-11206 *	#
US-PATENT-CLASS-52-81	c 37	N82-32732 *	#	US-PATENT-CLASS-525-61	c 27	N81-24257 *	#	US-PATENT-CLASS-528-208	c 27	N80-16158 *	#
US-PATENT-CLASS-521-124	c 25	N80-16116 *	#	US-PATENT-CLASS-525-61	c 23	N81-29160 *	#	US-PATENT-CLASS-528-208	c 27	N82-11206 *	#
US-PATENT-CLASS-521-125	c 25	N80-16116 *	#	US-PATENT-CLASS-525-61	c 25	N83-13188 *	#	US-PATENT-CLASS-528-210	c 27	N82-11206 *	#
US-PATENT-CLASS-521-127	c 25	N80-16116 *	#	US-PATENT-CLASS-526-13	c 27	N78-32256 *	#	US-PATENT-CLASS-528-211	c 27	N82-11206 *	#
US-PATENT-CLASS-521-141	c 51	N84-28361 *	#	US-PATENT-CLASS-526-193	c 27	N78-15276 *	#	US-PATENT-CLASS-528-220	c 27	N83-34040 *	#
US-PATENT-CLASS-521-142	c 51	N84-28361 *	#	US-PATENT-CLASS-526-1	c 27	N76-24405 *	#	US-PATENT-CLASS-528-220	c 27	N84-22746 *	#
US-PATENT-CLASS-521-146	c 25	N80-23383 *	#	US-PATENT-CLASS-526-201	c 25	N81-19242 *	#	US-PATENT-CLASS-528-220	c 27	N85-20123 *	#
US-PATENT-CLASS-521-149	c 51	N84-28361 *	#	US-PATENT-CLASS-526-217	c 25	N85-30039 *	#	US-PATENT-CLASS-528-220	c 24	N86-25416 *	#
US-PATENT-CLASS-521-157	c 25	N80-16116 *	#	US-PATENT-CLASS-526-217	c 27	N85-21350 *	#	US-PATENT-CLASS-528-220	c 27	N86-31726 *	#
US-PATENT-CLASS-521-27	c 27	N81-14076 *	#	US-PATENT-CLASS-526-217	c 25	N85-30039 *	#	US-PATENT-CLASS-528-221	c 27	N79-28307 *	#
US-PATENT-CLASS-521-32	c 27	N81-14076 *	#	US-PATENT-CLASS-526-225	c 27	N78-15276 *	#	US-PATENT-CLASS-528-222	c 27	N81-29229 *	#
US-PATENT-CLASS-521-55	c 25	N80-23383 *	#	US-PATENT-CLASS-526-23	c 27	N78-32256 *	#	US-PATENT-CLASS-528-222	c 27	N83-34040 *	#
US-PATENT-CLASS-521-62	c 27	N81-14076 *	#	US-PATENT-CLASS-526-255	c 27	N76-24405 *	#	US-PATENT-CLASS-528-222	c 27	N83-34041 *	#
US-PATENT-CLASS-521-918	c 25	N80-23383 *	#	US-PATENT-CLASS-526-259	c 27	N83-34040 *	#	US-PATENT-CLASS-528-222	c 27	N86-29039 *	#
US-PATENT-CLASS-523-135	c 27	N85-29044 *	#	US-PATENT-CLASS-526-261	c 27	N80-24438 *	#	US-PATENT-CLASS-528-223	c 27	N79-28307 *	#
US-PATENT-CLASS-523-205	c 27	N83-19900 *	#	US-PATENT-CLASS-526-262	c 27	N81-27272 *	#	US-PATENT-CLASS-528-225	c 27	N79-28307 *	#
US-PATENT-CLASS-523-433	c 24	N86-19380 *	#	US-PATENT-CLASS-526-262	c 27	N84-22745 *	#	US-PATENT-CLASS-528-225	c 27	N82-11206 *	#
US-PATENT-CLASS-523-434	c 27	N86-27451 *	#	US-PATENT-CLASS-526-262	c 27	N84-27885 *	#	US-PATENT-CLASS-528-226	c 27	N83-34041 *	#
US-PATENT-CLASS-523-435	c 24	N84-11213 *	#	US-PATENT-CLASS-526-262	c 27	N85-21347 *	#	US-PATENT-CLASS-528-226	c 27	N85-20124 *	#
US-PATENT-CLASS-523-440	c 27	N83-34043 *	#	US-PATENT-CLASS-526-262	c 27	N85-21350 *	#	US-PATENT-CLASS-528-226	c 27	N85-21348 *	#
US-PATENT-CLASS-523-443	c 27	N83-34043 *	#	US-PATENT-CLASS-526-262	c 27	N85-21351 *	#	US-PATENT-CLASS-528-227	c 27	N79-28307 *	#
US-PATENT-CLASS-523-445	c 24	N86-19380 *	#	US-PATENT-CLASS-526-262	c 27	N85-21352 *	#	US-PATENT-CLASS-528-228	c 27	N81-27272 *	#
US-PATENT-CLASS-523-445	c 27	N86-27451 *	#	US-PATENT-CLASS-526-262	c 25	N85-28982 *	#	US-PATENT-CLASS-528-228	c 27	N82-11206 *	#
US-PATENT-CLASS-523-454	c 24	N84-34571 *	#	US-PATENT-CLASS-526-262	c 25	N85-30039 *	#	US-PATENT-CLASS-528-228	c 27	N83-34040 *	#
US-PATENT-CLASS-523-454	c 27	N85-34282 *	#	US-PATENT-CLASS-526-262	c 27	N86-20560 *	#	US-PATENT-CLASS-528-228	c 27	N84-22745 *	#
US-PATENT-CLASS-523-456	c 24	N84-11213 *	#	US-PATENT-CLASS-526-262	c 24	N86-21590 *	#	US-PATENT-CLASS-528-229	c 27	N79-28307 *	#
US-PATENT-CLASS-523-458	c 24	N84-34571 *	#	US-PATENT-CLASS-526-265	c 24	N86-28131 *	#	US-PATENT-CLASS-528-229	c 27	N79-33316 *	#
US-PATENT-CLASS-523-458	c 27	N85-34282 *	#	US-PATENT-CLASS-526-274	c 27	N85-21347 *	#	US-PATENT-CLASS-528-229	c 27	N81-29229 *	#
US-PATENT-CLASS-523-461	c 27	N86-27451 *	#	US-PATENT-CLASS-526-275	c 27	N78-32256 *	#	US-PATENT-CLASS-528-229	c 27	N83-34040 *	#
US-PATENT-CLASS-523-66468	c 24	N86-19380 *	#	US-PATENT-CLASS-526-275	c 27	N80-24438 *	#	US-PATENT-CLASS-528-229	c 27	N85-21348 *	#
US-PATENT-CLASS-524-104	c 27	N83-28240 *	#	US-PATENT-CLASS-526-276	c 27	N78-32256 *	#	US-PATENT-CLASS-528-229	c 27	N85-21350 *	#
US-PATENT-CLASS-524-171	c 27	N84-22747 *	#	US-PATENT-CLASS-526-276	c 27	N80-24438 *	#	US-PATENT-CLASS-528-229	c 27	N85-21351 *	#
US-PATENT-CLASS-524-173	c 27	N83-28240 *	#	US-PATENT-CLASS-526-278	c 27	N78-32256 *	#	US-PATENT-CLASS-528-229	c 27	N85-21352 *	#
US-PATENT-CLASS-524-233	c 27	N83-28240 *	#	US-PATENT-CLASS-526-278	c 27	N80-24438 *	#	US-PATENT-CLASS-528-229	c 27	N85-34282 *	#
US-PATENT-CLASS-524-371	c 27	N84-14324 *	#	US-PATENT-CLASS-526-278	c 27	N78-32256 *	#	US-PATENT-CLASS-528-229	c 27	N86-19457 *	#
US-PATENT-CLASS-524-388	c 27	N85-29044 *	#	US-PATENT-CLASS-526-285	c 27	N83-34040 *	#	US-PATENT-CLASS-528-229	c 27	N85-20124 *	#
US-PATENT-CLASS-524-436	c 27	N83-19900 *	#	US-PATENT-CLASS-526-285	c 27	N86-27450 *	#	US-PATENT-CLASS-528-239	c 27	N85-20124 *	#
US-PATENT-CLASS-524-437	c 27	N83-19900 *	#	US-PATENT-CLASS-526-328	c 27	N85-29043 *	#	US-PATENT-CLASS-528-241	c 27	N85-20124 *	#
US-PATENT-CLASS-524-494	c 27	N84-14322 *	#	US-PATENT-CLASS-526-329.2	c 27	N85-29043 *	#	US-PATENT-CLASS-528-258	c 27	N85-20124 *	#
US-PATENT-CLASS-524-496	c 27	N84-14322 *	#	US-PATENT-CLASS-526-49	c 27	N78-32256 *	#	US-PATENT-CLASS-528-25	c 27	N84-22747 *	#
US-PATENT-CLASS-524-500	c 27	N84-14322 *	#	US-PATENT-CLASS-526-50	c 27	N78-32256 *	#	US-PATENT-CLASS-528-26	c 27	N84-22747 *	#
US-PATENT-CLASS-524-503	c 27	N83-19900 *	#	US-PATENT-CLASS-526-77	c 44	N79-25481 *	#	US-PATENT-CLASS-528-271	c 27	N84-27884 *	#
US-PATENT-CLASS-524-530	c 27	N84-14322 *	#	US-PATENT-CLASS-526-88	c 25	N81-19242 *	#	US-PATENT-CLASS-528-279	c 27	N85-20124 *	#
US-PATENT-CLASS-524-548	c 27	N86-20560 *	#	US-PATENT-CLASS-526-914	c 28	N81-15119 *	#	US-PATENT-CLASS-528-288	c 27	N85-29043 *	#
US-PATENT-CLASS-524-564	c 27	N83-19900 *	#	US-PATENT-CLASS-526-914	c 44	N79-25481 *	#	US-PATENT-CLASS-528-289	c 27	N85-29043 *	#
US-PATENT-CLASS-524-566	c 27	N85-29044 *	#	US-PATENT-CLASS-528-102	c 24	N86-19380 *	#	US-PATENT-CLASS-528-303	c 27	N85-29043 *	#
US-PATENT-CLASS-524-727	c 27	N83-28240 *	#	US-PATENT-CLASS-528-103	c 24	N86-19380 *	#	US-PATENT-CLASS-528-304	c 27	N85-29043 *	#
US-PATENT-CLASS-524-786	c 27	N83-19900 *	#	US-PATENT-CLASS-528-106	c 27	N85-34282 *	#	US-PATENT-CLASS-528-310	c 27	N81-17262 *	#
US-PATENT-CLASS-525-107	c 27	N85-34281 *	#	US-PATENT-CLASS-528-108	c 23	N86-32525 *	#	US-PATENT-CLASS-528-310	c 27	N81-24256 *	#
US-PATENT-CLASS-525-108	c 27	N86-27451 *	#	US-PATENT-CLASS-528-110	c 24	N84-11213 *	#	US-PATENT-CLASS-528-310	c 27	N82-24338 *	#
US-PATENT-CLASS-525-113	c 27	N85-34281 *	#	US-PATENT-CLASS-528-113	c 27	N85-34281 *	#	US-PATENT-CLASS-528-310	c 27	N84-27884 *	#
US-PATENT-CLASS-525-115	c 27	N86-27451 *	#	US-PATENT-CLASS-528-117	c 27	N85-34281 *	#	US-PATENT-CLASS-528-310	c 23	N86-19376 *	#
US-PATENT-CLASS-525-119	c 27	N85-34281 *	#	US-PATENT-CLASS-528-118	c 27	N81-17260 *	#	US-PATENT-CLASS-528-314	c 25	N85-30039 *	#
US-PATENT-CLASS-525-119	c 27	N86-27451 *	#	US-PATENT-CLASS-528-124	c 23	N86-32525 *	#	US-PATENT-CLASS-528-315	c 27	N85-21350 *	#
US-PATENT-CLASS-525-122	c 27	N86-27451 *	#	US-PATENT-CLASS-528-125	c 27	N83-34040 *	#	US-PATENT-CLASS-528-321	c 27	N85-21347 *	#
US-PATENT-CLASS-525-181	c 27	N83-28240 *	#	US-PATENT-CLASS-528-125	c 27	N84-22749 *	#	US-PATENT-CLASS-528-321	c 24	N86-25416 *	#
US-PATENT-CLASS-525-181	c 27	N85-21349 *	#	US-PATENT-CLASS-528-125	c 27	N85-21348 *	#	US-PATENT-CLASS-528-321	c 27	N86-31726 *	#
US-PATENT-CLASS-525-182	c 27	N85-21349 *	#	US-PATENT-CLASS-528-126	c 27	N79-28307 *	#	US-PATENT-CLASS-528-322	c 27	N81-17260 *	#
US-PATENT-CLASS-525-183	c 27	N83-28240 *	#	US-PATENT-CLASS-528-126	c 27	N82-11206 *	#	US-PATENT-CLASS-528-322	c 27	N84-22745 *	#
US-PATENT-CLASS-525-183	c 27	N85-21349 *	#	US-PATENT-CLASS-528-126	c 27	N83-34040 *	#	US-PATENT-CLASS-528-322	c 27	N84-27885 *	#
US-PATENT-CLASS-525-184	c 27	N83-28240 *	#	US-PATENT-CLASS-528-126	c 27	N85-21348 *	#	US-PATENT-CLASS-528-322	c 27	N85-21347 *	#
US-PATENT-CLASS-525-184	c 27	N85-21349 *	#	US-PATENT-CLASS-528-127	c 27	N79-28307 *	#	US-PATENT-CLASS-528-322	c 27	N85-21350 *	#
US-PATENT-CLASS-525-186	c 27	N85-34281 *	#	US-PATENT-CLASS-528-128	c 27	N79-28307 *	#	US-PATENT-CLASS-528-322	c 27	N85-21351 *	#
US-PATENT-CLASS-525-186	c 27	N86-20560 *	#	US-PATENT-CLASS-528-128	c 27	N83-34040 *	#	US-PATENT-CLASS-528-322	c 27	N85-21352 *	#
US-PATENT-CLASS-525-229	c 27	N85-34281 *	#	US-PATENT-CLASS-528-128	c 27	N84-22749 *	#	US-PATENT-CLASS-528-322	c 25	N85-28982 *	#
US-PATENT-CLASS-525-26	c 27	N85-29043 *	#	US-PATENT-CLASS-528-128	c 27	N85-21348 *	#	US-PATENT-CLASS-528-322	c 25	N85-30039 *	#
US-PATENT-CLASS-525-282	c 27	N84-14322 *	#	US-PATENT-CLASS-528-128	c 27	N83-34040 *	#	US-PATENT-CLASS-528-322	c 24	N86-19457 *	#
US-PATENT-CLASS-525-287	c 27	N84-14322 *	#	US-PATENT-CLASS-528-166	c 27	N85-21348 *	#	US-PATENT-CLASS-528-322	c 27	N86-25416 *	#
US-PATENT-CLASS-525-326	c 27	N80-24438 *	#	US-PATENT-CLASS-528-167	c 27	N85-21347 *	#	US-PATENT-CLASS-528-322	c 27	N86-31726 *	#
US-PATENT-CLASS-525-336	c 27	N80-24438 *	#	US-PATENT-CLASS-528-168	c 27	N81-27271 *	#	US-PATENT-CLASS-528-327	c 27	N84-27884 *	#
US-PATENT-CLASS-525-340	c 27	N80-24438 *	#	US-PATENT-CLASS-528-168	c 27	N82-18389 *	#	US-PATENT-CLASS-528-327	c 27	N86-19455 *	#
US-PATENT-CLASS-525-374	c 27	N80-24438 *	#	US-PATENT-CLASS-528-168	c 27	N85-21347 *	#	US-PATENT-CLASS-528-328	c 27	N82-24338 *	#
US-PATENT-CLASS-525-375	c 27	N80-24438 *	#	US-PATENT-CLASS-528-168	c 27	N85-34280 *	#	US-PATENT-CLASS-528-331	c 27	N79-28307 *	#
US-PATENT-CLASS-525-384	c 28	N81-15119 *	#	US-PATENT-CLASS-528-170	c 27	N85-21347 *	#	US-PATENT-CLASS-528-331	c 27	N84-27884 *	#
US-PATENT-CLASS-525-389	c 27	N84-22750 *	#	US-PATENT-CLASS-528-170	c 24	N86-25416 *	#	US-PATENT-CLASS-528-336	c 27	N79-28307 *	#
US-PATENT-CLASS-525-417	c 27	N84-22745 *	#	US-PATENT-CLASS-528-170	c 27	N86-31726 *	#	US-PATENT-CLASS-528-336	c 27	N85-20123 *	#
US-PATENT-CLASS-525-420	c 27	N85-20123 *	#								

US-PATENT-CLASS-528-342	c 27	N84-27885 *	US-PATENT-CLASS-55-100	c 25	N78-25148 *	US-PATENT-CLASS-568-4	c 27	N82-18389 *
US-PATENT-CLASS-528-342	c 27	N85-21350 *	US-PATENT-CLASS-55-101	c 25	N78-25148 *	US-PATENT-CLASS-568-4	c 27	N84-22750 *
US-PATENT-CLASS-528-342	c 27	N85-21351 *	US-PATENT-CLASS-55-105	c 35	N84-17555 *	US-PATENT-CLASS-568-5	c 27	N82-18389 *
US-PATENT-CLASS-528-342	c 27	N85-21352 *	US-PATENT-CLASS-55-118	c 35	N79-17192 *	US-PATENT-CLASS-568-5	c 27	N84-22750 *
US-PATENT-CLASS-528-342	c 25	N85-28982 *	US-PATENT-CLASS-55-122	c 35	N79-17192 *	US-PATENT-CLASS-568-852	c 27	N80-32514 *
US-PATENT-CLASS-528-342	c 27	N86-19457 *	US-PATENT-CLASS-55-126	c 35	N84-17555 *	US-PATENT-CLASS-568-861	c 27	N80-32514 *
US-PATENT-CLASS-528-345	c 27	N84-22748 *	US-PATENT-CLASS-55-127	c 35	N79-17192 *	US-PATENT-CLASS-57-906	c 37	N82-18601 *
US-PATENT-CLASS-528-345	c 27	N85-20123 *	US-PATENT-CLASS-55-131	c 35	N84-17555 *	US-PATENT-CLASS-570-123	c 25	N82-24312 *
US-PATENT-CLASS-528-347	c 27	N86-32568 *	US-PATENT-CLASS-55-138	c 35	N84-17555 *	US-PATENT-CLASS-570-129	c 25	N82-24312 *
US-PATENT-CLASS-528-348	c 27	N84-22748 *	US-PATENT-CLASS-55-139	c 35	N84-17555 *	US-PATENT-CLASS-58-24	c 10	N71-26326 *
US-PATENT-CLASS-528-351	c 27	N82-11206 *	US-PATENT-CLASS-55-145	c 35	N84-17555 *	US-PATENT-CLASS-585-24	c 27	N86-21675 *
US-PATENT-CLASS-528-352	c 27	N85-21348 *	US-PATENT-CLASS-55-15-8	c 52	N79-17192 *	US-PATENT-CLASS-60-39.08	c 37	N79-11403 *
US-PATENT-CLASS-528-352	c 27	N85-34280 *	US-PATENT-CLASS-55-155	c 35	N79-17192 *	US-PATENT-CLASS-60-108	c 33	N71-16104 *
US-PATENT-CLASS-528-352	c 27	N86-18456 *	US-PATENT-CLASS-55-158	c 18	N71-20742 *	US-PATENT-CLASS-60-1	c 15	N72-33477 *
US-PATENT-CLASS-528-353	c 23	N86-32525 *	US-PATENT-CLASS-55-158	c 44	N77-22907 *	US-PATENT-CLASS-60-200A	c 33	N72-25911 *
US-PATENT-CLASS-528-353	c 27	N81-19296 *	US-PATENT-CLASS-55-158	c 25	N82-21269 *	US-PATENT-CLASS-60-200A	c 33	N73-25952 *
US-PATENT-CLASS-528-353	c 27	N82-11206 *	US-PATENT-CLASS-55-159	c 34	N74-30608 *	US-PATENT-CLASS-60-200A	c 27	N78-17206 *
US-PATENT-CLASS-528-353	c 27	N85-21348 *	US-PATENT-CLASS-55-159	c 37	N79-21345 *	US-PATENT-CLASS-60-200R	c 20	N82-18314 *
US-PATENT-CLASS-528-353	c 27	N85-34280 *	US-PATENT-CLASS-55-15	c 71	N83-35781 *	US-PATENT-CLASS-60-200	c 28	N71-14044 *
US-PATENT-CLASS-528-361	c 24	N86-19456 *	US-PATENT-CLASS-55-15	c 71	N85-22104 *	US-PATENT-CLASS-60-202	c 28	N70-41922 *
US-PATENT-CLASS-528-362	c 25	N84-11213 *	US-PATENT-CLASS-55-160	c 15	N71-15968 *	US-PATENT-CLASS-60-202	c 28	N71-10574 *
US-PATENT-CLASS-528-362	c 25	N81-14016 *	US-PATENT-CLASS-55-16	c 06	N72-31140 *	US-PATENT-CLASS-60-202	c 25	N71-21694 *
US-PATENT-CLASS-528-362	c 27	N81-17259 *	US-PATENT-CLASS-55-179	c 14	N71-17588 *	US-PATENT-CLASS-60-202	c 28	N71-21822 *
US-PATENT-CLASS-528-362	c 27	N81-17262 *	US-PATENT-CLASS-55-179	c 54	N77-32722 *	US-PATENT-CLASS-60-202	c 28	N71-23081 *
US-PATENT-CLASS-528-362	c 27	N82-24338 *	US-PATENT-CLASS-55-184	c 35	N83-29652 *	US-PATENT-CLASS-60-202	c 28	N71-23293 *
US-PATENT-CLASS-528-362	c 27	N84-22744 *	US-PATENT-CLASS-55-199	c 23	N77-17161 *	US-PATENT-CLASS-60-202	c 28	N71-25213 *
US-PATENT-CLASS-528-362	c 27	N84-27684 *	US-PATENT-CLASS-55-202	c 34	N74-30608 *	US-PATENT-CLASS-60-202	c 28	N71-26173 *
US-PATENT-CLASS-528-38	c 27	N83-34040 *	US-PATENT-CLASS-55-202	c 35	N83-29652 *	US-PATENT-CLASS-60-202	c 28	N71-26642 *
US-PATENT-CLASS-528-394	c 27	N84-22750 *	US-PATENT-CLASS-55-204	c 15	N71-23023 *	US-PATENT-CLASS-60-202	c 28	N71-26781 *
US-PATENT-CLASS-528-399	c 27	N81-27271 *	US-PATENT-CLASS-55-206	c 44	N83-10501 *	US-PATENT-CLASS-60-202	c 28	N72-11709 *
US-PATENT-CLASS-528-399	c 27	N82-18389 *	US-PATENT-CLASS-55-241	c 35	N79-17192 *	US-PATENT-CLASS-60-202	c 28	N72-22770 *
US-PATENT-CLASS-528-399	c 27	N84-22750 *	US-PATENT-CLASS-55-242	c 35	N79-17192 *	US-PATENT-CLASS-60-202	c 28	N72-22771 *
US-PATENT-CLASS-528-399	c 23	N86-32525 *	US-PATENT-CLASS-55-255	c 35	N86-29174 *	US-PATENT-CLASS-60-202	c 28	N73-24783 *
US-PATENT-CLASS-528-401	c 27	N79-22300 *	US-PATENT-CLASS-55-259	c 35	N86-29174 *	US-PATENT-CLASS-60-202	c 25	N73-25760 *
US-PATENT-CLASS-528-401	c 25	N81-14016 *	US-PATENT-CLASS-55-26-9	c 35	N86-29174 *	US-PATENT-CLASS-60-202	c 28	N73-27899 *
US-PATENT-CLASS-528-401	c 27	N81-17259 *	US-PATENT-CLASS-55-261	c 35	N76-18401 *	US-PATENT-CLASS-60-202	c 20	N77-10148 *
US-PATENT-CLASS-528-401	c 27	N81-17262 *	US-PATENT-CLASS-55-269	c 35	N77-32722 *	US-PATENT-CLASS-60-202	c 20	N77-20182 *
US-PATENT-CLASS-528-401	c 27	N82-24338 *	US-PATENT-CLASS-55-270	c 35	N84-17555 *	US-PATENT-CLASS-60-202	c 20	N85-21256 *
US-PATENT-CLASS-528-401	c 23	N82-28353 *	US-PATENT-CLASS-55-277	c 71	N83-35781 *	US-PATENT-CLASS-60-203.1	c 20	N86-26368 *
US-PATENT-CLASS-528-401	c 27	N84-22744 *	US-PATENT-CLASS-55-277	c 71	N85-22104 *	US-PATENT-CLASS-60-203	c 20	N80-14188 *
US-PATENT-CLASS-528-402	c 25	N82-24312 *	US-PATENT-CLASS-55-283	c 35	N84-17555 *	US-PATENT-CLASS-60-204	c 07	N78-17055 *
US-PATENT-CLASS-528-406	c 23	N86-32525 *	US-PATENT-CLASS-55-291	c 35	N84-17555 *	US-PATENT-CLASS-60-204	c 07	N78-18067 *
US-PATENT-CLASS-528-407	c 24	N84-34571 *	US-PATENT-CLASS-55-2	c 25	N78-25148 *	US-PATENT-CLASS-60-204	c 44	N81-24519 *
US-PATENT-CLASS-528-407	c 27	N85-34281 *	US-PATENT-CLASS-55-2	c 28	N81-14103 *	US-PATENT-CLASS-60-211	c 28	N73-13773 *
US-PATENT-CLASS-528-407	c 27	N85-34282 *	US-PATENT-CLASS-55-2	c 35	N84-17555 *	US-PATENT-CLASS-60-214	c 15	N74-27360 *
US-PATENT-CLASS-528-407	c 23	N86-32525 *	US-PATENT-CLASS-55-306	c 28	N70-34788 *	US-PATENT-CLASS-60-215	c 06	N73-30097 *
US-PATENT-CLASS-528-422	c 27	N79-22300 *	US-PATENT-CLASS-55-35	c 05	N70-41297 *	US-PATENT-CLASS-60-215	c 15	N74-27360 *
US-PATENT-CLASS-528-422	c 25	N81-14016 *	US-PATENT-CLASS-55-360	c 35	N79-17192 *	US-PATENT-CLASS-60-217	c 12	N71-17631 *
US-PATENT-CLASS-528-422	c 27	N81-17259 *	US-PATENT-CLASS-55-366	c 35	N75-26334 *	US-PATENT-CLASS-60-225	c 28	N71-10780 *
US-PATENT-CLASS-528-422	c 27	N81-17262 *	US-PATENT-CLASS-55-38	c 71	N83-35781 *	US-PATENT-CLASS-60-226A	c 07	N77-17059 *
US-PATENT-CLASS-528-422	c 27	N82-24338 *	US-PATENT-CLASS-55-3	c 35	N78-12390 *	US-PATENT-CLASS-60-226A	c 07	N79-14096 *
US-PATENT-CLASS-528-422	c 23	N82-28353 *	US-PATENT-CLASS-55-400	c 11	N71-10777 *	US-PATENT-CLASS-60-226A	c 07	N79-14097 *
US-PATENT-CLASS-528-423	c 27	N84-22744 *	US-PATENT-CLASS-55-407	c 35	N79-17192 *	US-PATENT-CLASS-60-226A	c 07	N82-26293 *
US-PATENT-CLASS-528-423	c 27	N80-24438 *	US-PATENT-CLASS-55-408	c 15	N70-40062 *	US-PATENT-CLASS-60-226R	c 07	N78-18066 *
US-PATENT-CLASS-528-4	c 27	N81-27271 *	US-PATENT-CLASS-55-418	c 15	N71-22721 *	US-PATENT-CLASS-60-226R	c 07	N77-14025 *
US-PATENT-CLASS-528-4	c 27	N82-18389 *	US-PATENT-CLASS-55-43	c 34	N74-30608 *	US-PATENT-CLASS-60-226R	c 07	N77-28118 *
US-PATENT-CLASS-528-6	c 27	N82-18389 *	US-PATENT-CLASS-55-446	c 15	N72-22489 *	US-PATENT-CLASS-60-226R	c 07	N78-17055 *
US-PATENT-CLASS-528-6	c 27	N82-18389 *	US-PATENT-CLASS-55-464	c 15	N72-22489 *	US-PATENT-CLASS-60-226R	c 07	N78-25089 *
US-PATENT-CLASS-528-6	c 27	N84-22750 *	US-PATENT-CLASS-55-466	c 35	N84-17555 *	US-PATENT-CLASS-60-226R	c 07	N79-14096 *
US-PATENT-CLASS-528-7	c 25	N80-16116 *	US-PATENT-CLASS-55-493	c 14	N72-23457 *	US-PATENT-CLASS-60-226R	c 07	N81-19116 *
US-PATENT-CLASS-528-73	c 27	N82-18389 *	US-PATENT-CLASS-55-498	c 14	N72-23457 *	US-PATENT-CLASS-60-228	c 07	N77-17059 *
US-PATENT-CLASS-528-7	c 27	N84-22750 *	US-PATENT-CLASS-55-502	c 14	N72-23457 *	US-PATENT-CLASS-60-230	c 07	N78-27121 *
US-PATENT-CLASS-528-86	c 23	N85-28973 *	US-PATENT-CLASS-55-510	c 25	N74-12813 *	US-PATENT-CLASS-60-236	c 07	N81-19116 *
US-PATENT-CLASS-528-92	c 24	N84-34571 *	US-PATENT-CLASS-55-518	c 25	N74-12813 *	US-PATENT-CLASS-60-238	c 07	N81-19116 *
US-PATENT-CLASS-528-92	c 27	N85-34282 *	US-PATENT-CLASS-55-521	c 14	N72-23457 *	US-PATENT-CLASS-60-239	c 07	N81-19116 *
US-PATENT-CLASS-528-94	c 27	N85-34281 *	US-PATENT-CLASS-55-521	c 35	N86-29174 *	US-PATENT-CLASS-60-23	c 09	N71-26182 *
US-PATENT-CLASS-528-94	c 27	N86-19457 *	US-PATENT-CLASS-55-523	c 34	N76-27515 *	US-PATENT-CLASS-60-23	c 15	N72-12409 *
US-PATENT-CLASS-53-102	c 15	N71-21528 *	US-PATENT-CLASS-55-526	c 34	N76-27515 *	US-PATENT-CLASS-60-23	c 21	N73-31637 *
US-PATENT-CLASS-53-112A	c 15	N73-27405 *	US-PATENT-CLASS-55-528	c 35	N86-29174 *	US-PATENT-CLASS-60-23	c 15	N71-27432 *
US-PATENT-CLASS-53-22A	c 15	N73-27405 *	US-PATENT-CLASS-55-52	c 71	N83-35781 *	US-PATENT-CLASS-60-240	c 28	N71-24736 *
US-PATENT-CLASS-53-22	c 15	N71-23256 *	US-PATENT-CLASS-55-55	c 06	N72-31140 *	US-PATENT-CLASS-60-240	c 28	N73-13773 *
US-PATENT-CLASS-53-429	c 09	N82-29330 *	US-PATENT-CLASS-55-66	c 25	N80-23383 *	US-PATENT-CLASS-60-240	c 07	N80-18039 *
US-PATENT-CLASS-53-9	c 37	N77-23482 *	US-PATENT-CLASS-55-67	c 23	N77-17161 *	US-PATENT-CLASS-60-243	c 33	N71-21507 *
US-PATENT-CLASS-536-105	c 27	N77-30236 *	US-PATENT-CLASS-55-67	c 25	N80-23383 *	US-PATENT-CLASS-60-243	c 15	N71-27432 *
US-PATENT-CLASS-536-536-85	c 27	N77-30236 *	US-PATENT-CLASS-55-68	c 25	N80-23383 *	US-PATENT-CLASS-60-243	c 28	N73-13773 *
US-PATENT-CLASS-536-56	c 27	N77-30236 *	US-PATENT-CLASS-55-6	c 35	N84-17555 *	US-PATENT-CLASS-60-243	c 20	N79-21124 *
US-PATENT-CLASS-536-58	c 27	N77-30236 *	US-PATENT-CLASS-55-72	c 25	N80-23383 *	US-PATENT-CLASS-60-251	c 28	N70-41311 *
US-PATENT-CLASS-536-84	c 27	N77-30236 *	US-PATENT-CLASS-55-73	c 45	N79-12584 *	US-PATENT-CLASS-60-251	c 27	N71-21819 *
US-PATENT-CLASS-538-117	c 27	N81-17260 *	US-PATENT-CLASS-55-74	c 23	N77-17161 *	US-PATENT-CLASS-60-254	c 28	N72-20758 *
US-PATENT-CLASS-544-193	c 27	N78-15276 *	US-PATENT-CLASS-55-75	c 15	N71-26185 *	US-PATENT-CLASS-60-254	c 28	N73-24784 *
US-PATENT-CLASS-544-193	c 27	N79-28307 *	US-PATENT-CLASS-55-96	c 35	N84-17555 *	US-PATENT-CLASS-60-256	c 28	N73-24784 *
US-PATENT-CLASS-544-195	c 27	N78-32256 *	US-PATENT-CLASS-556-410	c 25	N85-21280 *	US-PATENT-CLASS-60-257	c 31	N70-41948 *
US-PATENT-CLASS-544-215	c 27	N84-22744 *	US-PATENT-CLASS-556-436	c 27	N86-21675 *	US-PATENT-CLASS-60-258	c 15	N72-21922 *
US-PATENT-CLASS-547-131	c 23	N82-28353 *	US-PATENT-CLASS-56-73	c 74	N86-26190 *	US-PATENT-CLASS-60-258	c 28	N71-22983 *
US-PATENT-CLASS-548-413	c 27	N83-31854 *	US-PATENT-CLASS-564-113	c 23	N86-19376 *	US-PATENT-CLASS-60-258	c 28	N71-28849 *
US-PATENT-CLASS-548-413	c 23	N86-19376 *	US-PATENT-CLASS-564-15	c 27	N86-32568 *	US-PATENT-CLASS-60-258	c 28	N72-17843 *
US-PATENT-CLASS-548-415	c 27	N83-31854 *	US-PATENT-CLASS-564-229	c 27	N81-24256 *	US-PATENT-CLASS-60-258	c 15	N72-25455 *
US-PATENT-CLASS-548-415	c 27	N84-22745 *	US-PATENT-CLASS-564-229	c 23	N82-28353 *	US-PATENT-CLASS-60-258	c 20	N74-13502 *
US-PATENT-CLASS-549-335	c 23	N85-33187 *	US-PATENT-CLASS-564-243	c 27	N84-22744 *	US-PATENT-CLASS-60-259	c 28	N70-41275 *
US-PATENT-CLASS-55-DIG.25	c 35	N84-17555 *	US-PATENT-CLASS-564-243	c 23	N86-21582 *	US-PATENT-CLASS-60-259	c 20	N74-13502 *
US-PATENT-CLASS-55-DIG.30	c 35	N84-17555 *	US-PATENT-CLASS-568-14	c 27	N86-32568 *	US-PATENT-CLASS-60-259	c 34	N77-30399 *
US-PATENT-CLASS-55-DIG.35	c 54	N75-27761 *	US-PATENT-CLASS-568-2	c 27	N82-18389 *	US-PATENT-CLASS-60-259	c 20	N80-14188 *
US-PATENT-CLASS-55-DIG.42	c 37	N85-29283 *	US-PATENT-CLASS-568-445	c 23	N82-16174 *	US-PATENT-CLASS-60-259	c 05	N81-26114 *
US-PATENT-CLASS-55-100	c 35	N78-12390 *	US-PATENT-CLASS-568-497	c 23	N82-16174 *	US-PATENT-CLASS-60-25	c 15	N73-24513 *

## US-PATENT-CLASS-60-25

US-PATENT-CLASS-60-25 ..... c 37 N74-21060 \* #  
 US-PATENT-CLASS-60-260 ..... c 28 N70-41992 \* #  
 US-PATENT-CLASS-60-262 ..... c 28 N72-18766 \* #  
 US-PATENT-CLASS-60-261 ..... c 37 N78-17384 \* #  
 US-PATENT-CLASS-60-262 ..... c 37 N78-17384 \* #  
 US-PATENT-CLASS-60-262 ..... c 07 N78-18067 \* #  
 US-PATENT-CLASS-60-262 ..... c 07 N83-33884 \* #  
 US-PATENT-CLASS-60-263 ..... c 28 N71-24321 \* #  
 US-PATENT-CLASS-60-263 ..... c 07 N77-28118 \* #  
 US-PATENT-CLASS-60-264 ..... c 07 N80-32392 \* #  
 US-PATENT-CLASS-60-265 ..... c 28 N71-20942 \* #  
 US-PATENT-CLASS-60-265 ..... c 33 N72-25911 \* #  
 US-PATENT-CLASS-60-265 ..... c 33 N73-25952 \* #  
 US-PATENT-CLASS-60-265 ..... c 20 N76-14191 \* #  
 US-PATENT-CLASS-60-266 ..... c 33 N71-28852 \* #  
 US-PATENT-CLASS-60-266 ..... c 28 N72-23810 \* #  
 US-PATENT-CLASS-60-267 ..... c 33 N71-29053 \* #  
 US-PATENT-CLASS-60-267 ..... c 33 N72-25911 \* #  
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 US-PATENT-CLASS-60-267 ..... c 20 N76-14191 \* #  
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 US-PATENT-CLASS-60-267 ..... c 05 N81-26114 \* #  
 US-PATENT-CLASS-60-267 ..... c 07 N83-33884 \* #  
 US-PATENT-CLASS-60-269 ..... c 21 N72-31637 \* #  
 US-PATENT-CLASS-60-26 ..... c 03 N73-20040 \* #  
 US-PATENT-CLASS-60-271 ..... c 28 N72-11708 \* #  
 US-PATENT-CLASS-60-271 ..... c 28 N72-23810 \* #  
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 US-PATENT-CLASS-60-271 ..... c 37 N78-17384 \* #  
 US-PATENT-CLASS-60-271 ..... c 07 N83-33884 \* #  
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 US-PATENT-CLASS-60-300 ..... c 28 N80-10374 \* #  
 US-PATENT-CLASS-60-303 ..... c 35 N84-17555 \* #  
 US-PATENT-CLASS-60-303 ..... c 37 N84-33808 \* #  
 US-PATENT-CLASS-60-311 ..... c 35 N84-17555 \* #  
 US-PATENT-CLASS-60-316 ..... c 34 N76-18364 \* #  
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 US-PATENT-CLASS-60-35.4 ..... c 28 N70-34294 \* #  
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 US-PATENT-CLASS-60-35.6 ..... c 28 N70-39899 \* #  
 US-PATENT-CLASS-60-35.6 ..... c 33 N71-15623 \* #  
 US-PATENT-CLASS-60-35.6 ..... c 27 N71-15634 \* #  
 US-PATENT-CLASS-60-35.6 ..... c 31 N71-15637 \* #  
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 US-PATENT-CLASS-60-35.6 ..... c 28 N71-15660 \* #  
 US-PATENT-CLASS-60-35.6 ..... c 14 N71-27186 \* #  
 US-PATENT-CLASS-60-36 ..... c 15 N72-33477 \* #  
 US-PATENT-CLASS-60-37 ..... c 15 N73-13467 \* #  
 US-PATENT-CLASS-60-39.02 ..... c 07 N86-20389 \* #  
 US-PATENT-CLASS-60-39.03 ..... c 07 N77-23106 \* #  
 US-PATENT-CLASS-60-39.03 ..... c 07 N80-18039 \* #  
 US-PATENT-CLASS-60-39.06 ..... c 07 N80-26298 \* #  
 US-PATENT-CLASS-60-39.06 ..... c 07 N81-29129 \* #  
 US-PATENT-CLASS-60-39.07 ..... c 44 N78-32539 \* #  
 US-PATENT-CLASS-60-39.07 ..... c 07 N82-32366 \* #  
 US-PATENT-CLASS-60-39.07 ..... c 07 N83-36029 \* #  
 US-PATENT-CLASS-60-39.14 ..... c 44 N78-32539 \* #  
 US-PATENT-CLASS-60-39.14 ..... c 07 N79-10057 \* #  
 US-PATENT-CLASS-60-39.23 ..... c 20 N76-14190 \* #  
 US-PATENT-CLASS-60-39.23 ..... c 07 N85-35195 \* #  
 US-PATENT-CLASS-60-39.24 ..... c 07 N81-19115 \* #

US-PATENT-CLASS-60-39.27 ..... c 07 N80-18039 \* #  
 US-PATENT-CLASS-60-39.28R ..... c 28 N73-19793 \* #  
 US-PATENT-CLASS-60-39.28R ..... c 07 N77-23106 \* #  
 US-PATENT-CLASS-60-39.28R ..... c 37 N78-10467 \* #  
 US-PATENT-CLASS-60-39.28R ..... c 37 N78-24545 \* #  
 US-PATENT-CLASS-60-39.28R ..... c 37 N79-11403 \* #  
 US-PATENT-CLASS-60-39.29 ..... c 20 N76-14190 \* #  
 US-PATENT-CLASS-60-39.29 ..... c 35 N76-14431 \* #  
 US-PATENT-CLASS-60-39.29 ..... c 07 N82-32366 \* #  
 US-PATENT-CLASS-60-39.29 ..... c 07 N84-33410 \* #  
 US-PATENT-CLASS-60-39.31 ..... c 07 N78-18066 \* #  
 US-PATENT-CLASS-60-39.31 ..... c 07 N79-14096 \* #  
 US-PATENT-CLASS-60-39.33 ..... c 44 N78-32539 \* #  
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 US-PATENT-CLASS-60-39.36 ..... c 28 N71-28915 \* #  
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 US-PATENT-CLASS-60-39.465 ..... c 20 N86-26368 \* #  
 US-PATENT-CLASS-60-39.46 ..... c 27 N71-15635 \* #  
 US-PATENT-CLASS-60-39.46 ..... c 15 N74-27360 \* #  
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 US-PATENT-CLASS-60-39.48 ..... c 28 N70-38199 \* #  
 US-PATENT-CLASS-60-39.48 ..... c 28 N70-39931 \* #  
 US-PATENT-CLASS-60-39.48 ..... c 27 N71-28929 \* #  
 US-PATENT-CLASS-60-39.51R ..... c 25 N78-10224 \* #  
 US-PATENT-CLASS-60-39.52 ..... c 07 N78-25089 \* #  
 US-PATENT-CLASS-60-39.65 ..... c 28 N71-28915 \* #  
 US-PATENT-CLASS-60-39.65 ..... c 23 N73-30665 \* #  
 US-PATENT-CLASS-60-39.65 ..... c 34 N78-27357 \* #  
 US-PATENT-CLASS-60-39.66 ..... c 15 N70-36411 \* #  
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 US-PATENT-CLASS-60-39.72 ..... c 23 N73-30665 \* #  
 US-PATENT-CLASS-60-39.74A ..... c 15 N72-25455 \* #  
 US-PATENT-CLASS-60-39.74R ..... c 23 N73-30665 \* #  
 US-PATENT-CLASS-60-39.74R ..... c 20 N76-14190 \* #  
 US-PATENT-CLASS-60-39.74 ..... c 28 N70-33241 \* #  
 US-PATENT-CLASS-60-39.74 ..... c 28 N72-17843 \* #  
 US-PATENT-CLASS-60-39.74 ..... c 20 N79-21125 \* #  
 US-PATENT-CLASS-60-39.82E ..... c 20 N78-24275 \* #  
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 US-PATENT-CLASS-60-39.48 ..... c 28 N72-11709 \* #  
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 US-PATENT-CLASS-60-516 ..... c 20 N75-24837 \* #  
 US-PATENT-CLASS-60-516 ..... c 44 N82-24640 \* #  
 US-PATENT-CLASS-60-516 ..... c 44 N76-29701 \* #  
 US-PATENT-CLASS-60-517 ..... c 37 N81-25370 \* #  
 US-PATENT-CLASS-60-518 ..... c 37 N81-14318 \* #  
 US-PATENT-CLASS-60-518 ..... c 37 N81-17432 \* #  
 US-PATENT-CLASS-60-51 ..... c 15 N71-27754 \* #  
 US-PATENT-CLASS-60-520 ..... c 37 N80-31790 \* #  
 US-PATENT-CLASS-60-524 ..... c 44 N81-17518 \* #  
 US-PATENT-CLASS-60-525 ..... c 37 N81-25370 \* #  
 US-PATENT-CLASS-60-527 ..... c 44 N74-33379 \* #  
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 US-PATENT-CLASS-60-530 ..... c 20 N75-24837 \* #  
 US-PATENT-CLASS-60-53 ..... c 37 N77-22479 \* #  
 US-PATENT-CLASS-60-54.5 ..... c 15 N71-10658 \* #  
 US-PATENT-CLASS-60-560 ..... c 35 N78-10428 \* #  
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 US-PATENT-CLASS-60-606 ..... c 28 N80-10374 \* #  
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 US-PATENT-CLASS-60-632 ..... c 20 N80-18097 \* #  
 US-PATENT-CLASS-60-641.12 ..... c 44 N84-23018 \* #  
 US-PATENT-CLASS-60-641.14 ..... c 44 N82-24640 \* #  
 US-PATENT-CLASS-60-641 ..... c 44 N75-32581 \* #  
 US-PATENT-CLASS-60-641 ..... c 44 N77-32582 \* #  
 US-PATENT-CLASS-60-641 ..... c 44 N78-17460 \* #  
 US-PATENT-CLASS-60-641 ..... c 44 N78-32542 \* #  
 US-PATENT-CLASS-60-641 ..... c 44 N79-18443 \* #  
 US-PATENT-CLASS-60-641 ..... c 44 N81-17518 \* #  
 US-PATENT-CLASS-60-641 ..... c 34 N79-20335 \* #  
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 US-PATENT-CLASS-60-671 ..... c 44 N78-32542 \* #  
 US-PATENT-CLASS-60-698 ..... c 44 N84-23018 \* #  
 US-PATENT-CLASS-60-716 ..... c 44 N84-23018 \* #  
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 US-PATENT-CLASS-60-721 ..... c 71 N83-32515 \* #  
 US-PATENT-CLASS-60-721 ..... c 71 N83-32516 \* #  
 US-PATENT-CLASS-60-721 ..... c 71 N84-23233 \* #  
 US-PATENT-CLASS-60-726 ..... c 07 N81-29129 \* #  
 US-PATENT-CLASS-60-726 ..... c 07 N82-32366 \* #  
 US-PATENT-CLASS-60-730 ..... c 05 N81-26114 \* #  
 US-PATENT-CLASS-60-730 ..... c 37 N84-22958 \* #  
 US-PATENT-CLASS-60-733 ..... c 07 N80-26298 \* #  
 US-PATENT-CLASS-60-736 ..... c 37 N84-22958 \* #  
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 US-PATENT-CLASS-60-746 ..... c 07 N80-26298 \* #  
 US-PATENT-CLASS-60-748 ..... c 07 N85-35195 \* #  
 US-PATENT-CLASS-60-757 ..... c 07 N84-24577 \* #  
 US-PATENT-CLASS-60-836 ..... c 24 N78-14096 \* #  
 US-PATENT-CLASS-60-97 ..... c 03 N71-12260 \* #  
 US-PATENT-CLASS-60-114 ..... c 52 N83-27577 \* #  
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 US-PATENT-CLASS-60-368 ..... c 54 N84-11758 \* #  
 US-PATENT-CLASS-60-378 ..... c 54 N84-11758 \* #  
 US-PATENT-CLASS-60-396 ..... c 54 N84-11758 \* #  
 US-PATENT-CLASS-60-8 ..... c 52 N83-21785 \* #  
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 US-PATENT-CLASS-62-DIG.5 ..... c 05 N81-26114 \* #  
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 US-PATENT-CLASS-62-128 ..... c 35 N84-28018 \* #  
 US-PATENT-CLASS-62-129 ..... c 31 N76-14284 \* #  
 US-PATENT-CLASS-62-12 ..... c 28 N81-14103 \* #  
 US-PATENT-CLASS-62-148 ..... c 44 N82-26776 \* #  
 US-PATENT-CLASS-62-15 ..... c 06 N70-34946 \* #  
 US-PATENT-CLASS-62-176 ..... c 05 N73-26071 \* #  
 US-PATENT-CLASS-62-18 ..... c 28 N81-14103 \* #  
 US-PATENT-CLASS-62-207 ..... c 05 N73-26071 \* #  
 US-PATENT-CLASS-62-209 ..... c 05 N73-26071 \* #  
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 US-PATENT-CLASS-62-259 ..... c 05 N73-20137 \* #  
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 US-PATENT-CLASS-62-315 ..... c 34 N77-19353 \* #  
 US-PATENT-CLASS-62-317 ..... c 77 N75-20139 \* #  
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 US-PATENT-CLASS-62-384 ..... c 23 N71-24725 \* #  
 US-PATENT-CLASS-62-3 ..... c 20 N75-24837 \* #  
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 US-PATENT-CLASS-62-45 ..... c 35 N74-15093 \* #  
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 US-PATENT-CLASS-62-467 ..... c 33 N72-25911 \* #  
 US-PATENT-CLASS-62-467 ..... c 33 N73-25952 \* #  
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 US-PATENT-CLASS-62-47 ..... c 28 N81-14103 \* #  
 US-PATENT-CLASS-62-48 ..... c 28 N78-24365 \* #  
 US-PATENT-CLASS-62-49 ..... c 31 N83-31897 \* #  
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 US-PATENT-CLASS-62-50 ..... c 35 N78-12390 \* #  
 US-PATENT-CLASS-62-514 R ..... c 35 N83-32026 \* #  
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 US-PATENT-CLASS-62-514R ..... c 35 N78-12390 \* #  
 US-PATENT-CLASS-62-514R ..... c 31 N78-17237 \* #  
 US-PATENT-CLASS-62-514R ..... c 31 N78-25256 \* #  
 US-PATENT-CLASS-62-514R ..... c 51 N79-10694 \* #  
 US-PATENT-CLASS-62-514R ..... c 31 N79-17029 \* #  
 US-PATENT-CLASS-62-514R ..... c 34 N79-20336 \* #  
 US-PATENT-CLASS-62-514R ..... c 35 N81-14287 \* #  
 US-PATENT-CLASS-62-514R ..... c 31 N83-31897 \* #  
 US-PATENT-CLASS-62-514R ..... c 34 N83-34221 \* #  
 US-PATENT-CLASS-62-514 ..... c 23 N71-26654 \* #  
 US-PATENT-CLASS-62-51 ..... c 15 N72-17453 \* #  
 US-PATENT-CLASS-62-55.5 ..... c 11 N71-24964 \* #  
 US-PATENT-CLASS-62-55.5 ..... c 15 N72-22484 \* #

US-PATENT-CLASS-62-55	c 15	N70-38020 *	US-PATENT-CLASS-72-63	c 20	N75-18310 *	US-PATENT-CLASS-73-147	c 09	N76-23273 *
US-PATENT-CLASS-62-55	c 34	N77-30399 *	US-PATENT-CLASS-72-63	c 37	N76-14461 *	US-PATENT-CLASS-73-147	c 34	N76-27517 *
US-PATENT-CLASS-62-56	c 05	N72-11084 *	US-PATENT-CLASS-72-83	c 15	N71-22723 *	US-PATENT-CLASS-73-147	c 09	N77-10071 *
US-PATENT-CLASS-62-82	c 34	N83-34221 *	US-PATENT-CLASS-73-DIG.11	c 35	N78-18390 *	US-PATENT-CLASS-73-147	c 09	N78-31129 *
US-PATENT-CLASS-62-8	c 15	N69-23190 *	US-PATENT-CLASS-73-1-DV	c 71	N86-21276 *	US-PATENT-CLASS-73-147	c 35	N79-14347 *
US-PATENT-CLASS-62-8	c 23	N71-15467 *	US-PATENT-CLASS-73-1B	c 35	N76-24523 *	US-PATENT-CLASS-73-147	c 09	N79-21083 *
US-PATENT-CLASS-62-8	c 15	N71-23025 *	US-PATENT-CLASS-73-1B	c 35	N84-28019 *	US-PATENT-CLASS-73-147	c 02	N80-20224 *
US-PATENT-CLASS-62-8	c 23	N72-25619 *	US-PATENT-CLASS-73-1DV	c 14	N73-27379 *	US-PATENT-CLASS-73-147	c 06	N81-17057 *
US-PATENT-CLASS-62-8	c 37	N76-29590 *	US-PATENT-CLASS-73-1F	c 35	N74-21019 *	US-PATENT-CLASS-73-147	c 09	N82-11088 *
US-PATENT-CLASS-62-8	c 44	N78-29701 *	US-PATENT-CLASS-73-1R	c 14	N71-29134 *	US-PATENT-CLASS-73-147	c 09	N82-23254 *
US-PATENT-CLASS-62-8	c 44	N83-28574 *	US-PATENT-CLASS-73-1R	c 35	N75-15932 *	US-PATENT-CLASS-73-147	c 71	N83-17235 *
US-PATENT-CLASS-62-8	c 31	N85-21404 *	US-PATENT-CLASS-73-1R	c 35	N78-15432 *	US-PATENT-CLASS-73-147	c 44	N83-21503 *
US-PATENT-CLASS-62-78	c 51	N78-10694 *	US-PATENT-CLASS-73-100	c 15	N70-41993 *	US-PATENT-CLASS-73-147	c 44	N83-21504 *
US-PATENT-CLASS-62-7	c 15	N73-12486 *	US-PATENT-CLASS-73-100	c 32	N72-25877 *	US-PATENT-CLASS-73-147	c 74	N83-21949 *
US-PATENT-CLASS-62-80	c 23	N72-25619 *	US-PATENT-CLASS-73-103	c 15	N71-17896 *	US-PATENT-CLASS-73-147	c 35	N84-22934 *
US-PATENT-CLASS-62-85	c 23	N72-25619 *	US-PATENT-CLASS-73-103	c 14	N72-27412 *	US-PATENT-CLASS-73-147	c 09	N84-34448 *
US-PATENT-CLASS-62-89	c 05	N73-26071 *	US-PATENT-CLASS-73-103	c 14	N73-32323 *	US-PATENT-CLASS-73-147	c 09	N85-21178 *
US-PATENT-CLASS-62-93	c 15	N69-21465 *	US-PATENT-CLASS-73-103	c 35	N76-18400 *	US-PATENT-CLASS-73-147	c 35	N86-32696 *
US-PATENT-CLASS-62-93	c 03	N72-28025 *	US-PATENT-CLASS-73-104	c 35	N74-32879 *	US-PATENT-CLASS-73-149	c 14	N72-11363 *
US-PATENT-CLASS-62-93	c 77	N75-20139 *	US-PATENT-CLASS-73-105	c 14	N70-34161 *	US-PATENT-CLASS-73-149	c 52	N74-10975 *
US-PATENT-CLASS-64-18	c 15	N71-28467 *	US-PATENT-CLASS-73-105	c 14	N71-17586 *	US-PATENT-CLASS-73-15.4	c 14	N71-17659 *
US-PATENT-CLASS-64-27	c 15	N71-28959 *	US-PATENT-CLASS-73-115	c 35	N79-14345 *	US-PATENT-CLASS-73-15.4	c 35	N74-32879 *
US-PATENT-CLASS-64-28	c 15	N69-27505 *	US-PATENT-CLASS-73-115	c 07	N84-22559 *	US-PATENT-CLASS-73-15.6	c 14	N70-35368 *
US-PATENT-CLASS-65-DIG.11	c 37	N74-21063 *	US-PATENT-CLASS-73-116	c 11	N70-33278 *	US-PATENT-CLASS-73-15.6	c 14	N71-24234 *
US-PATENT-CLASS-65-DIG.4	c 71	N78-10837 *	US-PATENT-CLASS-73-116	c 11	N70-34844 *	US-PATENT-CLASS-73-15.6	c 14	N71-26136 *
US-PATENT-CLASS-65-DIG.7	c 71	N78-10837 *	US-PATENT-CLASS-73-116	c 14	N70-40203 *	US-PATENT-CLASS-73-15.6	c 32	N72-25877 *
US-PATENT-CLASS-65-102	c 71	N78-10837 *	US-PATENT-CLASS-73-116	c 11	N70-41677 *	US-PATENT-CLASS-73-15.6	c 09	N74-19528 *
US-PATENT-CLASS-65-108	c 35	N77-24455 *	US-PATENT-CLASS-73-116	c 11	N71-10604 *	US-PATENT-CLASS-73-15.6	c 35	N76-24523 *
US-PATENT-CLASS-65-11.1	c 31	N86-21718 *	US-PATENT-CLASS-73-116	c 31	N71-15643 *	US-PATENT-CLASS-73-15.6	c 35	N77-22450 *
US-PATENT-CLASS-65-12	c 31	N86-21718 *	US-PATENT-CLASS-73-117.1	c 11	N72-27262 *	US-PATENT-CLASS-73-15.6	c 39	N78-10493 *
US-PATENT-CLASS-65-134	c 71	N83-35781 *	US-PATENT-CLASS-73-117.1	c 09	N84-27749 *	US-PATENT-CLASS-73-15R	c 33	N72-25913 *
US-PATENT-CLASS-65-142	c 31	N81-33319 *	US-PATENT-CLASS-73-117.4	c 14	N71-20429 *	US-PATENT-CLASS-73-15R	c 14	N73-28486 *
US-PATENT-CLASS-65-142	c 27	N82-28442 *	US-PATENT-CLASS-73-117.4	c 28	N71-27094 *	US-PATENT-CLASS-73-15R	c 25	N74-18551 *
US-PATENT-CLASS-65-142	c 31	N83-31896 *	US-PATENT-CLASS-73-117.4	c 35	N75-29382 *	US-PATENT-CLASS-73-15R	c 31	N74-27900 *
US-PATENT-CLASS-65-142	c 31	N83-35176 *	US-PATENT-CLASS-73-117	c 14	N71-22965 *	US-PATENT-CLASS-73-15R	c 09	N77-27131 *
US-PATENT-CLASS-65-142	c 71	N84-28568 *	US-PATENT-CLASS-73-12	c 14	N71-23225 *	US-PATENT-CLASS-73-15R	c 74	N81-17887 *
US-PATENT-CLASS-65-142	c 26	N86-32551 *	US-PATENT-CLASS-73-12	c 14	N71-26161 *	US-PATENT-CLASS-73-15A	c 39	N86-20841 *
US-PATENT-CLASS-65-160	c 71	N84-28568 *	US-PATENT-CLASS-73-12	c 14	N72-16282 *	US-PATENT-CLASS-73-150R	c 35	N84-28018 *
US-PATENT-CLASS-65-1	c 31	N86-21718 *	US-PATENT-CLASS-73-12	c 14	N72-25411 *	US-PATENT-CLASS-73-155	c 46	N80-10709 *
US-PATENT-CLASS-65-21.2	c 26	N86-32551 *	US-PATENT-CLASS-73-12	c 14	N73-23237 *	US-PATENT-CLASS-73-155	c 46	N80-24906 *
US-PATENT-CLASS-65-21.3	c 31	N83-35176 *	US-PATENT-CLASS-73-12	c 35	N74-21062 *	US-PATENT-CLASS-73-159	c 31	N79-11246 *
US-PATENT-CLASS-65-21.3	c 71	N84-28568 *	US-PATENT-CLASS-73-12	c 35	N75-33367 *	US-PATENT-CLASS-73-15	c 14	N70-34156 *
US-PATENT-CLASS-65-21.4	c 31	N81-33319 *	US-PATENT-CLASS-73-12	c 75	N76-14931 *	US-PATENT-CLASS-73-15	c 14	N71-15992 *
US-PATENT-CLASS-65-21.4	c 27	N82-28442 *	US-PATENT-CLASS-73-12	c 35	N77-18417 *	US-PATENT-CLASS-73-15	c 14	N71-22964 *
US-PATENT-CLASS-65-21.4	c 31	N83-35176 *	US-PATENT-CLASS-73-12	c 43	N79-25443 *	US-PATENT-CLASS-73-15	c 11	N71-24985 *
US-PATENT-CLASS-65-21.4	c 71	N84-28568 *	US-PATENT-CLASS-73-12	c 43	N80-14423 *	US-PATENT-CLASS-73-15	c 11	N71-28629 *
US-PATENT-CLASS-65-213	c 71	N84-16940 *	US-PATENT-CLASS-73-12	c 43	N80-23711 *	US-PATENT-CLASS-73-161	c 11	N72-25288 *
US-PATENT-CLASS-65-214	c 31	N83-31896 *	US-PATENT-CLASS-73-12	c 37	N84-33807 *	US-PATENT-CLASS-73-167	c 15	N84-16231 *
US-PATENT-CLASS-65-22	c 31	N81-33319 *	US-PATENT-CLASS-73-133R	c 35	N77-14407 *	US-PATENT-CLASS-73-170A	c 35	N78-27384 *
US-PATENT-CLASS-65-22	c 27	N82-28442 *	US-PATENT-CLASS-73-133	c 14	N71-23725 *	US-PATENT-CLASS-73-170A	c 48	N80-18667 *
US-PATENT-CLASS-65-22	c 31	N83-31896 *	US-PATENT-CLASS-73-133	c 15	N72-22482 *	US-PATENT-CLASS-73-170R	c 07	N73-20175 *
US-PATENT-CLASS-65-22	c 31	N83-35176 *	US-PATENT-CLASS-73-134	c 14	N70-40201 *	US-PATENT-CLASS-73-170R	c 14	N73-28487 *
US-PATENT-CLASS-65-2	c 71	N78-10837 *	US-PATENT-CLASS-73-136R	c 15	N72-26371 *	US-PATENT-CLASS-73-170R	c 14	N73-32327 *
US-PATENT-CLASS-65-2	c 31	N86-21718 *	US-PATENT-CLASS-73-136	c 14	N70-34818 *	US-PATENT-CLASS-73-170R	c 33	N74-27862 *
US-PATENT-CLASS-65-30R	c 27	N78-32260 *	US-PATENT-CLASS-73-140	c 11	N72-25288 *	US-PATENT-CLASS-73-170R	c 35	N75-33367 *
US-PATENT-CLASS-65-32	c 71	N78-10837 *	US-PATENT-CLASS-73-141AB	c 14	N72-33377 *	US-PATENT-CLASS-73-170R	c 91	N76-30131 *
US-PATENT-CLASS-65-3	c 37	N75-26371 *	US-PATENT-CLASS-73-141A	c 14	N72-21405 *	US-PATENT-CLASS-73-170R	c 06	N83-10040 *
US-PATENT-CLASS-65-4B	c 71	N78-10837 *	US-PATENT-CLASS-73-141A	c 14	N72-22437 *	US-PATENT-CLASS-73-170R	c 35	N84-28018 *
US-PATENT-CLASS-65-43	c 37	N75-15992 *	US-PATENT-CLASS-73-141A	c 35	N74-26945 *	US-PATENT-CLASS-73-170	c 14	N71-14996 *
US-PATENT-CLASS-65-43	c 24	N79-25143 *	US-PATENT-CLASS-73-141A	c 35	N74-27865 *	US-PATENT-CLASS-73-170	c 17	N73-32415 *
US-PATENT-CLASS-65-59A	c 35	N77-24455 *	US-PATENT-CLASS-73-141A	c 35	N75-33369 *	US-PATENT-CLASS-73-178-R	c 06	N84-34443 *
US-PATENT-CLASS-65-60D	c 27	N78-32260 *	US-PATENT-CLASS-73-141A	c 52	N81-20703 *	US-PATENT-CLASS-73-178R	c 35	N75-29381 *
US-PATENT-CLASS-65-61	c 74	N80-24149 *	US-PATENT-CLASS-73-141	c 14	N70-41957 *	US-PATENT-CLASS-73-178R	c 04	N77-19056 *
US-PATENT-CLASS-65-7	c 18	N71-23088 *	US-PATENT-CLASS-73-141	c 15	N71-20441 *	US-PATENT-CLASS-73-178R	c 37	N78-27424 *
US-PATENT-CLASS-65-87	c 71	N78-10837 *	US-PATENT-CLASS-73-141	c 14	N71-23790 *	US-PATENT-CLASS-73-178R	c 35	N79-26372 *
US-PATENT-CLASS-6554	c 35	N77-24455 *	US-PATENT-CLASS-73-141	c 26	N71-25490 *	US-PATENT-CLASS-73-178R	c 06	N81-17057 *
US-PATENT-CLASS-6564	c 35	N77-24455 *	US-PATENT-CLASS-73-142	c 15	N70-40180 *	US-PATENT-CLASS-73-178R	c 04	N81-21047 *
US-PATENT-CLASS-70-58	c 33	N81-25299 *	US-PATENT-CLASS-73-142	c 14	N71-20439 *	US-PATENT-CLASS-73-178R	c 18	N81-29152 *
US-PATENT-CLASS-71-98	c 51	N83-17045 *	US-PATENT-CLASS-73-143	c 35	N75-19615 *	US-PATENT-CLASS-73-178R	c 06	N82-16075 *
US-PATENT-CLASS-72-253	c 15	N71-22797 *	US-PATENT-CLASS-73-143	c 14	N75-24794 *	US-PATENT-CLASS-73-178R	c 06	N83-10040 *
US-PATENT-CLASS-72-258	c 15	N73-13464 *	US-PATENT-CLASS-73-144	c 15	N71-22878 *	US-PATENT-CLASS-73-178R	c 06	N84-27733 *
US-PATENT-CLASS-72-307	c 15	N72-12408 *	US-PATENT-CLASS-73-147	c 11	N70-33287 *	US-PATENT-CLASS-73-178T	c 06	N86-27280 *
US-PATENT-CLASS-72-324	c 71	N86-21276 *	US-PATENT-CLASS-73-147	c 14	N70-33386 *	US-PATENT-CLASS-73-178	c 14	N70-36807 *
US-PATENT-CLASS-72-341	c 71	N86-21276 *	US-PATENT-CLASS-73-147	c 14	N70-34813 *	US-PATENT-CLASS-73-178	c 14	N70-40157 *
US-PATENT-CLASS-72-34	c 15	N71-21536 *	US-PATENT-CLASS-73-147	c 11	N70-36913 *	US-PATENT-CLASS-73-179	c 34	N85-21568 *
US-PATENT-CLASS-72-354	c 15	N71-23811 *	US-PATENT-CLASS-73-147	c 14	N70-40400 *	US-PATENT-CLASS-73-17	c 06	N71-24607 *
US-PATENT-CLASS-72-363	c 37	N76-14461 *	US-PATENT-CLASS-73-147	c 14	N70-41366 *	US-PATENT-CLASS-73-180	c 35	N78-14364 *
US-PATENT-CLASS-72-364	c 15	N71-18579 *	US-PATENT-CLASS-73-147	c 11	N71-15926 *	US-PATENT-CLASS-73-180	c 02	N80-28300 *
US-PATENT-CLASS-72-369	c 15	N71-24679 *	US-PATENT-CLASS-73-147	c 09	N71-16086 *	US-PATENT-CLASS-73-182	c 14	N73-13415 *
US-PATENT-CLASS-72-436	c 37	N79-28550 *	US-PATENT-CLASS-73-147	c 12	N71-20436 *	US-PATENT-CLASS-73-182	c 35	N74-32878 *
US-PATENT-CLASS-72-447	c 15	N73-13463 *	US-PATENT-CLASS-73-147	c 09	N71-20816 *	US-PATENT-CLASS-73-182	c 35	N76-14429 *
US-PATENT-CLASS-72-451	c 37	N79-28550 *	US-PATENT-CLASS-73-147	c 11	N71-21481 *	US-PATENT-CLASS-73-182	c 02	N80-28300 *
US-PATENT-CLASS-72-453	c 37	N76-18454 *	US-PATENT-CLASS-73-147	c 11	N71-23030 *	US-PATENT-CLASS-73-187	c 35	N85-20295 *
US-PATENT-CLASS-72-467	c 15	N71-23817 *	US-PATENT-CLASS-73-147	c 15	N71-27006 *	US-PATENT-CLASS-73-188	c 06	N80-18036 *
US-PATENT-CLASS-72-46	c 24	N75-33181 *	US-PATENT-CLASS-73-147	c 15	N71-28740 *	US-PATENT-CLASS-73-189	c 20	N71-16281 *
US-PATENT-CLASS-72-470	c 37	N79-28550 *	US-PATENT-CLASS-73-147	c 11	N71-33612 *	US-PATENT-CLASS-73-189	c 02	N71-23007 *
US-PATENT-CLASS-72-476	c 15	N73-13463 *	US-PATENT-CLASS-73-147	c 11	N72-17183 *	US-PATENT-CLASS-73-189	c 14	N71-23726 *
US-PATENT-CLASS-72-53	c 15	N71-18616 *	US-PATENT-CLASS-73-147	c 14	N72-21407 *	US-PATENT-CLASS-73-189	c 14	N73-13415 *
US-PATENT-CLASS-72-53	c 15	N73-32360 *	US-PATENT-CLASS-73-147	c 11	N72-22446 *	US-PATENT-CLASS-73-189	c 14	N73-25460 *
US-PATENT-CLASS-72-54	c 37	N76-14461 *	US-PATENT-CLASS-73-147	c 11	N73-12264 *	US-PATENT-CLASS-73-189	c 35	N76-24524 *
US-PATENT-CLASS-72-56	c 15	N70-34249 *	US-PATENT-CLASS-73-147	c 14	N73-13415 *	US-PATENT-CLASS-73-189	c 34	N76-27517 *
US-PATENT-CLASS-72-56	c 15	N71-24833 *	US-PATENT-CLASS-73-147	c 12	N73-25262 *	US-PATENT-CLASS-73-189	c 34	N77-27345 *
US-PATENT-CLASS-72-56	c 15	N71-24865 *	US-PATENT-CLASS-73-147	c 12	N73-28144 *	US-PATENT-CLASS-73-189	c 34	N79-12359 *
US-PATENT-CLASS-72-56	c 15	N71-26148 *	US-PATENT-CLASS-73-147	c 09	N74-17955 *	US-PATENT-CLASS-73-189	c 06	N80-18036 *
US-PATENT-CLASS-72-60	c 15	N71-24836 *	US-PATENT-CLASS-73-147	c 34	N74-27730 *	US-PATENT-CLASS-73-189	c 47	N84-28292 *
US-PATENT-CLASS-72-61	c 15	N71-26346 *	US-PATENT-CLASS-73-147	c 09	N75-12969 *	US-PATENT-CLASS-73-190H	c 35	N74-22095 *

## US-PATENT-CLASS-73-190R

US-PATENT-CLASS-73-190R	c 34	N74-27859 *	#	US-PATENT-CLASS-73-398C	c 33	N76-21390 *	#	US-PATENT-CLASS-73-505	c 26	N86-32551 *	#
US-PATENT-CLASS-73-190R	c 35	N81-19426 *	#	US-PATENT-CLASS-73-398	c 14	N70-34816 *	#	US-PATENT-CLASS-73-510	c 18	N81-29152 *	#
US-PATENT-CLASS-73-190	c 33	N71-15641 *	#	US-PATENT-CLASS-73-398	c 14	N71-21072 *	#	US-PATENT-CLASS-73-515	c 14	N72-25410 *	#
US-PATENT-CLASS-73-190	c 14	N71-22989 *	#	US-PATENT-CLASS-73-398	c 09	N71-24597 *	#	US-PATENT-CLASS-73-517B	c 35	N74-15094 *	#
US-PATENT-CLASS-73-190	c 33	N71-23085 *	#	US-PATENT-CLASS-73-398	c 14	N73-30394 *	#	US-PATENT-CLASS-73-517R	c 17	N76-29347 *	#
US-PATENT-CLASS-73-190	c 33	N71-29051 *	#	US-PATENT-CLASS-73-399	c 37	N76-18454 *	#	US-PATENT-CLASS-73-517	c 11	N70-38196 *	#
US-PATENT-CLASS-73-194A	c 14	N72-17329 *	#	US-PATENT-CLASS-73-3	c 34	N74-27730 *	#	US-PATENT-CLASS-73-517	c 14	N70-41682 *	#
US-PATENT-CLASS-73-194EM	c 14	N73-32326 *	#	US-PATENT-CLASS-73-3	c 34	N86-12547 *	#	US-PATENT-CLASS-73-517	c 14	N71-15969 *	#
US-PATENT-CLASS-73-194EM	c 35	N74-21018 *	#	US-PATENT-CLASS-73-4R	c 35	N74-13132 *	#	US-PATENT-CLASS-73-521	c 14	N72-25410 *	#
US-PATENT-CLASS-73-194E	c 14	N73-20478 *	#	US-PATENT-CLASS-73-4R	c 35	N79-14347 *	#	US-PATENT-CLASS-73-521	c 35	N86-32695 *	#
US-PATENT-CLASS-73-194E	c 05	N73-32015 *	#	US-PATENT-CLASS-73-4V	c 35	N80-18358 *	#	US-PATENT-CLASS-73-557	c 35	N75-19614 *	#
US-PATENT-CLASS-73-194F	c 14	N72-11365 *	#	US-PATENT-CLASS-73-40.5A	c 35	N74-15092 *	#	US-PATENT-CLASS-73-557	c 07	N76-27232 *	#
US-PATENT-CLASS-73-194M	c 05	N73-32015 *	#	US-PATENT-CLASS-73-40.5	c 35	N85-21597 *	#	US-PATENT-CLASS-73-56	c 35	N80-18357 *	#
US-PATENT-CLASS-73-194M	c 35	N75-30503 *	#	US-PATENT-CLASS-73-40.7	c 14	N71-10779 *	#	US-PATENT-CLASS-73-579	c 39	N78-15512 *	#
US-PATENT-CLASS-73-194R	c 34	N76-27517 *	#	US-PATENT-CLASS-73-40.7	c 15	N71-24910 *	#	US-PATENT-CLASS-73-579	c 35	N79-10390 *	#
US-PATENT-CLASS-73-194VS	c 34	N79-12359 *	#	US-PATENT-CLASS-73-40.7	c 14	N71-28992 *	#	US-PATENT-CLASS-73-579	c 33	N83-16626 *	#
US-PATENT-CLASS-73-194	c 14	N70-41994 *	#	US-PATENT-CLASS-73-40.7	c 35	N74-32879 *	#	US-PATENT-CLASS-73-579	c 27	N85-20126 *	#
US-PATENT-CLASS-73-194	c 14	N71-23226 *	#	US-PATENT-CLASS-73-40.7	c 35	N85-29213 *	#	US-PATENT-CLASS-73-57	c 14	N71-17584 *	#
US-PATENT-CLASS-73-194	c 12	N71-26546 *	#	US-PATENT-CLASS-73-400	c 14	N71-23093 *	#	US-PATENT-CLASS-73-57	c 14	N73-14429 *	#
US-PATENT-CLASS-73-195	c 35	N75-30503 *	#	US-PATENT-CLASS-73-400	c 14	N71-24232 *	#	US-PATENT-CLASS-73-582	c 27	N85-20126 *	#
US-PATENT-CLASS-73-198	c 14	N69-24257 *	#	US-PATENT-CLASS-73-400	c 35	N79-33450 *	#	US-PATENT-CLASS-73-588	c 37	N84-33807 *	#
US-PATENT-CLASS-73-198	c 14	N72-17327 *	#	US-PATENT-CLASS-73-401	c 14	N70-34820 *	#	US-PATENT-CLASS-73-588	c 27	N85-20126 *	#
US-PATENT-CLASS-73-1	c 10	N71-13545 *	#	US-PATENT-CLASS-73-40	c 35	N75-15931 *	#	US-PATENT-CLASS-73-589	c 35	N79-10390 *	#
US-PATENT-CLASS-73-1	c 09	N71-22988 *	#	US-PATENT-CLASS-73-419	c 35	N80-18358 *	#	US-PATENT-CLASS-73-589	c 35	N84-22933 *	#
US-PATENT-CLASS-73-204	c 12	N71-17569 *	#	US-PATENT-CLASS-73-420	c 14	N71-22752 *	#	US-PATENT-CLASS-73-594	c 35	N84-22933 *	#
US-PATENT-CLASS-73-204	c 35	N76-24524 *	#	US-PATENT-CLASS-73-421.5R	c 13	N74-13132 *	#	US-PATENT-CLASS-73-597	c 33	N83-16626 *	#
US-PATENT-CLASS-73-204	c 35	N77-20400 *	#	US-PATENT-CLASS-73-421.5R	c 14	N72-25323 *	#	US-PATENT-CLASS-73-597	c 52	N83-27578 *	#
US-PATENT-CLASS-73-204	c 52	N83-27577 *	#	US-PATENT-CLASS-73-421.5R	c 52	N73-30395 *	#	US-PATENT-CLASS-73-603	c 38	N78-32447 *	#
US-PATENT-CLASS-73-205L	c 02	N80-20224 *	#	US-PATENT-CLASS-73-421.5R	c 35	N74-20728 *	#	US-PATENT-CLASS-73-60	c 14	N73-14429 *	#
US-PATENT-CLASS-73-212	c 14	N70-36824 *	#	US-PATENT-CLASS-73-421.5R	c 35	N76-18401 *	#	US-PATENT-CLASS-73-61.1C	c 23	N77-17161 *	#
US-PATENT-CLASS-73-212	c 14	N73-13415 *	#	US-PATENT-CLASS-73-421.5R	c 35	N77-32456 *	#	US-PATENT-CLASS-73-61R	c 35	N78-27384 *	#
US-PATENT-CLASS-73-212	c 35	N76-14429 *	#	US-PATENT-CLASS-73-421.5	c 14	N73-12444 *	#	US-PATENT-CLASS-73-61	c 14	N71-26199 *	#
US-PATENT-CLASS-73-212	c 06	N80-18036 *	#	US-PATENT-CLASS-73-421R	c 54	N76-14804 *	#	US-PATENT-CLASS-73-620	c 35	N84-22928 *	#
US-PATENT-CLASS-73-221	c 35	N75-19611 *	#	US-PATENT-CLASS-73-422GC	c 13	N72-25323 *	#	US-PATENT-CLASS-73-626	c 52	N79-26771 *	#
US-PATENT-CLASS-73-228	c 34	N77-27345 *	#	US-PATENT-CLASS-73-422TC	c 13	N72-25323 *	#	US-PATENT-CLASS-73-629	c 33	N83-16626 *	#
US-PATENT-CLASS-73-23.1	c 06	N69-39936 *	#	US-PATENT-CLASS-73-422	c 14	N71-20435 *	#	US-PATENT-CLASS-73-630	c 39	N78-15512 *	#
US-PATENT-CLASS-73-23.1	c 06	N72-17094 *	#	US-PATENT-CLASS-73-425.2	c 91	N76-30131 *	#	US-PATENT-CLASS-73-632	c 38	N79-14398 *	#
US-PATENT-CLASS-73-23.1	c 06	N72-25146 *	#	US-PATENT-CLASS-73-425.4R	c 35	N78-27384 *	#	US-PATENT-CLASS-73-633	c 52	N79-14751 *	#
US-PATENT-CLASS-73-23.1	c 25	N76-18245 *	#	US-PATENT-CLASS-73-425.6	c 15	N72-21465 *	#	US-PATENT-CLASS-73-633	c 35	N84-22928 *	#
US-PATENT-CLASS-73-23.1	c 23	N77-17161 *	#	US-PATENT-CLASS-73-432PS	c 76	N75-12810 *	#	US-PATENT-CLASS-73-64.4	c 34	N83-31993 *	#
US-PATENT-CLASS-73-23	c 14	N71-10774 *	#	US-PATENT-CLASS-73-432PS	c 35	N75-33367 *	#	US-PATENT-CLASS-73-641	c 38	N79-14398 *	#
US-PATENT-CLASS-73-23	c 05	N71-11202 *	#	US-PATENT-CLASS-73-432PS	c 35	N78-18390 *	#	US-PATENT-CLASS-73-644	c 38	N79-14398 *	#
US-PATENT-CLASS-73-23	c 52	N74-20728 *	#	US-PATENT-CLASS-73-432R	c 33	N73-27796 *	#	US-PATENT-CLASS-73-644	c 52	N79-14751 *	#
US-PATENT-CLASS-73-23	c 35	N75-29380 *	#	US-PATENT-CLASS-73-432R	c 14	N73-28487 *	#	US-PATENT-CLASS-73-646	c 71	N78-14867 *	#
US-PATENT-CLASS-73-23	c 25	N78-15210 *	#	US-PATENT-CLASS-73-432R	c 91	N76-30131 *	#	US-PATENT-CLASS-73-646	c 35	N84-12445 *	#
US-PATENT-CLASS-73-23	c 35	N78-19465 *	#	US-PATENT-CLASS-73-432R	c 35	N77-19385 *	#	US-PATENT-CLASS-73-647	c 32	N79-24203 *	#
US-PATENT-CLASS-73-24	c 06	N69-39733 *	#	US-PATENT-CLASS-73-432R	c 35	N78-18390 *	#	US-PATENT-CLASS-73-655	c 35	N80-14371 *	#
US-PATENT-CLASS-73-28	c 14	N73-27376 *	#	US-PATENT-CLASS-73-432R	c 15	N84-16231 *	#	US-PATENT-CLASS-73-657	c 35	N85-30282 *	#
US-PATENT-CLASS-73-28	c 14	N73-30395 *	#	US-PATENT-CLASS-73-432SD	c 11	N72-27262 *	#	US-PATENT-CLASS-73-658	c 35	N84-12445 *	#
US-PATENT-CLASS-73-28	c 35	N76-18401 *	#	US-PATENT-CLASS-73-432SD	c 11	N73-20267 *	#	US-PATENT-CLASS-73-65	c 14	N71-22992 *	#
US-PATENT-CLASS-73-28	c 35	N78-18390 *	#	US-PATENT-CLASS-73-432SD	c 35	N77-18417 *	#	US-PATENT-CLASS-73-661	c 35	N80-14371 *	#
US-PATENT-CLASS-73-290B	c 14	N72-11363 *	#	US-PATENT-CLASS-73-432T	c 74	N84-11921 *	#	US-PATENT-CLASS-73-67.1	c 35	N75-12271 *	#
US-PATENT-CLASS-73-290	c 14	N71-10500 *	#	US-PATENT-CLASS-73-432	c 11	N70-34786 *	#	US-PATENT-CLASS-73-67.2	c 11	N69-21540 *	#
US-PATENT-CLASS-73-290	c 14	N71-21007 *	#	US-PATENT-CLASS-73-432	c 11	N70-38675 *	#	US-PATENT-CLASS-73-67.2	c 15	N71-18132 *	#
US-PATENT-CLASS-73-295	c 23	N71-17802 *	#	US-PATENT-CLASS-73-432	c 05	N70-42000 *	#	US-PATENT-CLASS-73-67.2	c 14	N72-22440 *	#
US-PATENT-CLASS-73-295	c 31	N76-14284 *	#	US-PATENT-CLASS-73-432	c 31	N71-16221 *	#	US-PATENT-CLASS-73-67.2	c 35	N78-17358 *	#
US-PATENT-CLASS-73-29	c 14	N71-17701 *	#	US-PATENT-CLASS-73-432	c 27	N71-16223 *	#	US-PATENT-CLASS-73-67.3	c 32	N73-26910 *	#
US-PATENT-CLASS-73-29	c 14	N71-20741 *	#	US-PATENT-CLASS-73-432	c 30	N71-17788 *	#	US-PATENT-CLASS-73-67.5R	c 38	N74-15395 *	#
US-PATENT-CLASS-73-301	c 12	N71-26387 *	#	US-PATENT-CLASS-73-432	c 14	N71-23227 *	#	US-PATENT-CLASS-73-67.5R	c 39	N77-28511 *	#
US-PATENT-CLASS-73-304C	c 14	N71-29134 *	#	US-PATENT-CLASS-73-432	c 10	N71-26339 *	#	US-PATENT-CLASS-73-67.8S	c 35	N74-10415 *	#
US-PATENT-CLASS-73-304	c 14	N72-22442 *	#	US-PATENT-CLASS-73-432	c 11	N71-28629 *	#	US-PATENT-CLASS-73-67.8S	c 38	N74-20726 *	#
US-PATENT-CLASS-73-30	c 14	N70-41681 *	#	US-PATENT-CLASS-73-432	c 14	N71-30026 *	#	US-PATENT-CLASS-73-67.9	c 52	N74-20726 *	#
US-PATENT-CLASS-73-32R	c 76	N75-12810 *	#	US-PATENT-CLASS-73-45.5	c 35	N74-21062 *	#	US-PATENT-CLASS-73-683.31	c 35	N81-29407 *	#
US-PATENT-CLASS-73-32R	c 35	N84-28018 *	#	US-PATENT-CLASS-73-456	c 12	N71-17573 *	#	US-PATENT-CLASS-73-684.52	c 35	N81-29407 *	#
US-PATENT-CLASS-73-32	c 14	N70-41330 *	#	US-PATENT-CLASS-73-468	c 37	N78-24515 *	#	US-PATENT-CLASS-73-69	c 71	N74-10616 *	#
US-PATENT-CLASS-73-336.5	c 35	N78-25391 *	#	US-PATENT-CLASS-73-46	c 35	N84-28082 *	#	US-PATENT-CLASS-73-70.2	c 14	N71-10616 *	#
US-PATENT-CLASS-73-336.5	c 35	N85-29212 *	#	US-PATENT-CLASS-73-49.2	c 32	N75-19612 *	#	US-PATENT-CLASS-73-705	c 36	N85-21639 *	#
US-PATENT-CLASS-73-339	c 33	N73-27796 *	#	US-PATENT-CLASS-73-49.2	c 35	N71-24285 *	#	US-PATENT-CLASS-73-708	c 34	N85-21639 *	#
US-PATENT-CLASS-73-341	c 14	N71-15598 *	#	US-PATENT-CLASS-73-49.2	c 35	N75-15931 *	#	US-PATENT-CLASS-73-71.2	c 14	N70-34794 *	#
US-PATENT-CLASS-73-341	c 44	N82-16474 *	#	US-PATENT-CLASS-73-49.2	c 35	N75-19612 *	#	US-PATENT-CLASS-73-71.3	c 35	N74-15146 *	#
US-PATENT-CLASS-73-343R	c 52	N77-10780 *	#	US-PATENT-CLASS-73-49.3	c 14	N71-26672 *	#	US-PATENT-CLASS-73-71.4	c 32	N71-16428 *	#
US-PATENT-CLASS-73-343R	c 35	N80-18357 *	#	US-PATENT-CLASS-73-49.8	c 14	N69-27503 *	#	US-PATENT-CLASS-73-71.4	c 32	N71-26681 *	#
US-PATENT-CLASS-73-343	c 33	N71-16356 *	#	US-PATENT-CLASS-73-49.8	c 15	N71-29132 *	#	US-PATENT-CLASS-73-71.5R	c 71	N74-31148 *	#
US-PATENT-CLASS-73-343	c 11	N71-21475 *	#	US-PATENT-CLASS-73-498	c 04	N81-21047 *	#	US-PATENT-CLASS-73-71.5U	c 38	N74-15395 *	#
US-PATENT-CLASS-73-355R	c 14	N72-24477 *	#	US-PATENT-CLASS-73-492	c 14	N72-25411 *	#	US-PATENT-CLASS-73-71.6	c 14	N71-27185 *	#
US-PATENT-CLASS-73-355R	c 35	N80-18359 *	#	US-PATENT-CLASS-73-493	c 17	N78-29347 *	#	US-PATENT-CLASS-73-71.6	c 14	N72-27412 *	#
US-PATENT-CLASS-73-355	c 14	N71-27323 *	#	US-PATENT-CLASS-73-497	c 14	N71-30265 *	#	US-PATENT-CLASS-73-71.6	c 14	N73-13416 *	#
US-PATENT-CLASS-73-355	c 14	N72-28437 *	#	US-PATENT-CLASS-73-497	c 35	N74-15094 *	#	US-PATENT-CLASS-73-71.6	c 35	N77-18417 *	#
US-PATENT-CLASS-73-356	c 35	N75-25122 *	#	US-PATENT-CLASS-73-4	c 14	N71-18481 *	#	US-PATENT-CLASS-73-71.6	c 35	N79-14347 *	#
US-PATENT-CLASS-73-35	c 33	N72-27959 *	#	US-PATENT-CLASS-73-4	c 14	N71-23036 *	#	US-PATENT-CLASS-73-714	c 34	N79-24285 *	#
US-PATENT-CLASS-73-361	c 35	N81-26431 *	#	US-PATENT-CLASS-73-4	c 14	N71-23755 *	#	US-PATENT-CLASS-73-714	c 35	N84-14491 *	#
US-PATENT-CLASS-73-362AR	c 35	N77-27368 *	#	US-PATENT-CLASS-73-4	c 14	N73-30390 *	#	US-PATENT-CLASS-73-721	c 35	N79-14347 *	#
US-PATENT-CLASS-73-37.5	c 35	N86-32698 *	#	US-PATENT-CLASS-73-502	c 35	N86-32695 *	#	US-PATENT-CLASS-73-721	c 35	N84-22934 *	#
US-PATENT-CLASS-73-379	c 05	N73-27941 *	#	US-PATENT-CLASS-73-504	c 04	N81-21047 *	#	US-PATENT-CLASS-73-724	c 32	N79-24203 *	#
US-PATENT-CLASS-73-379	c 05	N73-30078 *	#	US-PATENT-CLASS-73-505	c 23	N71-16098 *	#	US-PATENT-CLASS-73-724	c 52	N80-18691 *	#
US-PATENT-CLASS-73-379	c 35	N75-15932 *	#	US-PATENT-CLASS-73-505	c 12	N75-24774 *	#	US-PATENT-CLASS-73-724	c 33	N82-26572 *	#
US-PATENT-CLASS-73-379	c 39	N83-20280 *	#	US-PATENT-CLASS-73-505	c 71	N78-10837 *	#	US-PATENT-CLASS-73-753	c 35	N85-21597 *	#
US-PATENT-CLASS-73-382	c 10	N71-13537 *	#	US-PATENT-CLASS-73-505	c 71	N79-20827 *	#	US-PATENT-CLASS-73-756	c 35	N78-24515 *	#
US-PATENT-CLASS-73-382	c 14	N71-17587 *	#	US							



US-PATENT-CLASS-73-79	c 14	N71-26161 *	US-PATENT-CLASS-74-18.1	c 37	N82-24493 *	US-PATENT-CLASS-75-170	c 37	N77-19458 *
US-PATENT-CLASS-73-7	c 25	N86-19413 *	US-PATENT-CLASS-74-18.2	c 11	N71-27036 *	US-PATENT-CLASS-75-170	c 26	N77-20201 *
US-PATENT-CLASS-73-810	c 39	N78-22537 *	US-PATENT-CLASS-74-18.2	c 37	N82-24483 *	US-PATENT-CLASS-75-170	c 26	N77-32279 *
US-PATENT-CLASS-73-818	c 35	N83-21312 *	US-PATENT-CLASS-74-217R	c 37	N74-23070 *	US-PATENT-CLASS-75-170	c 26	N77-32280 *
US-PATENT-CLASS-73-818	c 39	N83-32081 *	US-PATENT-CLASS-74-2	c 15	N71-24600 *	US-PATENT-CLASS-75-170	c 26	N78-18183 *
US-PATENT-CLASS-73-81	c 14	N73-32321 *	US-PATENT-CLASS-74-2	c 31	N73-14855 *	US-PATENT-CLASS-75-171	c 17	N70-33283 *
US-PATENT-CLASS-73-822	c 39	N83-32081 *	US-PATENT-CLASS-74-384	c 37	N78-15457 *	US-PATENT-CLASS-75-171	c 17	N70-36616 *
US-PATENT-CLASS-73-827	c 39	N86-20841 *	US-PATENT-CLASS-74-385	c 07	N78-17056 *	US-PATENT-CLASS-75-171	c 17	N71-16026 *
US-PATENT-CLASS-73-82	c 43	N78-25443 *	US-PATENT-CLASS-74-409	c 15	N71-21744 *	US-PATENT-CLASS-75-171	c 17	N73-32415 *
US-PATENT-CLASS-73-82	c 43	N80-14423 *	US-PATENT-CLASS-74-417	c 07	N81-14318 *	US-PATENT-CLASS-75-172	c 17	N71-23365 *
US-PATENT-CLASS-73-82	c 43	N80-23711 *	US-PATENT-CLASS-74-417	c 37	N81-17432 *	US-PATENT-CLASS-75-173	c 26	N75-27126 *
US-PATENT-CLASS-73-831	c 35	N85-34375 *	US-PATENT-CLASS-74-417	c 37	N85-20338 *	US-PATENT-CLASS-75-173	c 26	N75-27127 *
US-PATENT-CLASS-73-833	c 24	N84-27829 *	US-PATENT-CLASS-74-424.8B	c 37	N75-15050 *	US-PATENT-CLASS-75-178R	c 04	N78-20114 *
US-PATENT-CLASS-73-84	c 14	N71-22765 *	US-PATENT-CLASS-74-424.8VA	c 37	N85-20338 *	US-PATENT-CLASS-75-178R	c 26	N80-23419 *
US-PATENT-CLASS-73-84	c 14	N73-19420 *	US-PATENT-CLASS-74-424.8VA	c 37	N71-26835 *	US-PATENT-CLASS-75-20F	c 15	N72-11367 *
US-PATENT-CLASS-73-84	c 35	N77-27367 *	US-PATENT-CLASS-74-424.8	c 15	N80-32716 *	US-PATENT-CLASS-75-200	c 26	N74-10521 *
US-PATENT-CLASS-73-856	c 39	N83-32081 *	US-PATENT-CLASS-74-425	c 37	N75-13266 *	US-PATENT-CLASS-75-200	c 37	N74-13179 *
US-PATENT-CLASS-73-856	c 24	N84-27829 *	US-PATENT-CLASS-74-436	c 37	N71-24964 *	US-PATENT-CLASS-75-200	c 24	N75-13032 *
US-PATENT-CLASS-73-856	c 35	N85-34375 *	US-PATENT-CLASS-74-468	c 15	N72-21463 *	US-PATENT-CLASS-75-200	c 37	N75-26371 *
US-PATENT-CLASS-73-85	c 14	N72-33377 *	US-PATENT-CLASS-74-468	c 15	N72-28495 *	US-PATENT-CLASS-75-200	c 24	N80-33482 *
US-PATENT-CLASS-73-880	c 39	N83-32081 *	US-PATENT-CLASS-74-471XY	c 15	N75-27780 *	US-PATENT-CLASS-75-202	c 17	N71-15468 *
US-PATENT-CLASS-73-861.05	c 33	N83-31954 *	US-PATENT-CLASS-74-471	c 54	N70-41581 *	US-PATENT-CLASS-75-203	c 27	N79-14213 *
US-PATENT-CLASS-73-861.07	c 34	N86-12547 *	US-PATENT-CLASS-74-471	c 05	N70-42073 *	US-PATENT-CLASS-75-204	c 18	N71-22894 *
US-PATENT-CLASS-73-861.58	c 35	N86-25752 *	US-PATENT-CLASS-74-471	c 03	N71-20740 *	US-PATENT-CLASS-75-205	c 27	N79-14213 *
US-PATENT-CLASS-73-861.65	c 02	N80-28300 *	US-PATENT-CLASS-74-471	c 15	N82-24205 *	US-PATENT-CLASS-75-206	c 15	N72-25448 *
US-PATENT-CLASS-73-861.66	c 02	N80-28300 *	US-PATENT-CLASS-74-479	c 08	N75-12930 *	US-PATENT-CLASS-75-206	c 27	N79-14213 *
US-PATENT-CLASS-73-861.71	c 47	N84-28292 *	US-PATENT-CLASS-74-480R	c 05	N82-24205 *	US-PATENT-CLASS-75-208R	c 37	N75-26371 *
US-PATENT-CLASS-73-861	c 34	N81-26402 *	US-PATENT-CLASS-74-480R	c 08	N71-26537 *	US-PATENT-CLASS-75-208	c 18	N72-25539 *
US-PATENT-CLASS-73-862.01	c 35	N86-19581 *	US-PATENT-CLASS-74-5.12	c 31	N73-13644 *	US-PATENT-CLASS-75-211	c 18	N72-25539 *
US-PATENT-CLASS-73-862.04	c 35	N86-32696 *	US-PATENT-CLASS-74-5.22	c 21	N76-26175 *	US-PATENT-CLASS-75-212	c 37	N75-26371 *
US-PATENT-CLASS-73-862.06	c 54	N82-26987 *	US-PATENT-CLASS-74-5.34	c 04	N83-33882 *	US-PATENT-CLASS-75-212	c 27	N79-14213 *
US-PATENT-CLASS-73-862.54	c 37	N83-36482 *	US-PATENT-CLASS-74-5.34	c 06	N71-23289 *	US-PATENT-CLASS-75-213	c 15	N72-25448 *
US-PATENT-CLASS-73-862.54	c 35	N85-20294 *	US-PATENT-CLASS-74-5.47	c 21	N74-28097 *	US-PATENT-CLASS-75-213	c 37	N74-13179 *
US-PATENT-CLASS-73-862.54	c 35	N86-19581 *	US-PATENT-CLASS-74-5.5	c 35	N84-28082 *	US-PATENT-CLASS-75-214	c 37	N74-13179 *
US-PATENT-CLASS-73-862.61	c 35	N86-32696 *	US-PATENT-CLASS-74-5.5	c 37	N85-29142 *	US-PATENT-CLASS-75-214	c 37	N75-26371 *
US-PATENT-CLASS-73-862.65	c 35	N84-28015 *	US-PATENT-CLASS-74-5.6D	c 33	N74-15094 *	US-PATENT-CLASS-75-222	c 28	N70-36197 *
US-PATENT-CLASS-73-863.11	c 35	N83-29650 *	US-PATENT-CLASS-74-5.6	c 35	N71-18323 *	US-PATENT-CLASS-75-222	c 37	N75-26371 *
US-PATENT-CLASS-73-863.11	c 37	N85-29286 *	US-PATENT-CLASS-74-5.7	c 35	N76-14158 *	US-PATENT-CLASS-75-222	c 24	N80-33482 *
US-PATENT-CLASS-73-863.21	c 35	N86-26595 *	US-PATENT-CLASS-74-5.7	c 15	N73-12488 *	US-PATENT-CLASS-75-225	c 34	N76-27515 *
US-PATENT-CLASS-73-863.31	c 45	N83-25217 *	US-PATENT-CLASS-74-5F	c 15	N72-22485 *	US-PATENT-CLASS-75-226	c 18	N72-25539 *
US-PATENT-CLASS-73-863.31	c 35	N86-26595 *	US-PATENT-CLASS-74-501R	c 15	N78-17676 *	US-PATENT-CLASS-75-226	c 26	N74-10521 *
US-PATENT-CLASS-73-863.72	c 35	N86-26595 *	US-PATENT-CLASS-74-515E	c 54	N70-41954 *	US-PATENT-CLASS-75-226	c 37	N74-13179 *
US-PATENT-CLASS-73-863.83	c 45	N83-25217 *	US-PATENT-CLASS-74-519	c 03	N81-19087 *	US-PATENT-CLASS-75-229	c 27	N79-14213 *
US-PATENT-CLASS-73-863.86	c 35	N85-29213 *	US-PATENT-CLASS-74-519	c 05	N78-33101 *	US-PATENT-CLASS-75-239	c 27	N78-17206 *
US-PATENT-CLASS-73-864.34	c 35	N86-26595 *	US-PATENT-CLASS-74-572	c 07	N79-10422 *	US-PATENT-CLASS-75-241	c 27	N78-17206 *
US-PATENT-CLASS-73-864.41	c 35	N84-28018 *	US-PATENT-CLASS-74-572	c 37	N79-14527 *	US-PATENT-CLASS-75-25	c 28	N81-15119 *
US-PATENT-CLASS-73-864.52	c 35	N85-29213 *	US-PATENT-CLASS-74-572	c 44	N81-29163 *	US-PATENT-CLASS-75-63	c 15	N71-27184 *
US-PATENT-CLASS-73-864.63	c 45	N83-25217 *	US-PATENT-CLASS-74-572	c 24	N84-28082 *	US-PATENT-CLASS-75-65R	c 24	N77-27187 *
US-PATENT-CLASS-73-864.81	c 37	N85-29286 *	US-PATENT-CLASS-74-573R	c 37	N79-14382 *	US-PATENT-CLASS-75-66	c 17	N71-26773 *
US-PATENT-CLASS-73-86	c 14	N69-39975 *	US-PATENT-CLASS-74-586	c 37	N84-22928 *	US-PATENT-CLASS-75-66	c 06	N73-13129 *
US-PATENT-CLASS-73-86	c 33	N71-21586 *	US-PATENT-CLASS-74-58	c 35	N74-18127 *	US-PATENT-CLASS-75-66	c 17	N73-28573 *
US-PATENT-CLASS-73-86	c 33	N73-27796 *	US-PATENT-CLASS-74-584.6	c 37	N74-18127 *	US-PATENT-CLASS-77.5AQ	c 27	N81-15104 *
US-PATENT-CLASS-73-86	c 34	N74-15652 *	US-PATENT-CLASS-74-594.7	c 37	N71-17692 *	US-PATENT-CLASS-77.5CH	c 27	N81-15104 *
US-PATENT-CLASS-73-88.5R	c 15	N72-17452 *	US-PATENT-CLASS-74-63	c 15	N80-32716 *	US-PATENT-CLASS-78-1	c 15	N70-33330 *
US-PATENT-CLASS-73-88.5R	c 32	N73-26910 *	US-PATENT-CLASS-74-661	c 37	N76-15457 *	US-PATENT-CLASS-78-704	c 36	N79-18307 *
US-PATENT-CLASS-73-88.5R	c 52	N74-27864 *	US-PATENT-CLASS-74-665B	c 37	N80-32716 *	US-PATENT-CLASS-8-DIG.12	c 27	N80-26446 *
US-PATENT-CLASS-73-88.5R	c 35	N76-14430 *	US-PATENT-CLASS-74-665C	c 37	N79-20377 *	US-PATENT-CLASS-8-DIG.18	c 27	N80-26446 *
US-PATENT-CLASS-73-88.5SD	c 33	N76-19338 *	US-PATENT-CLASS-74-674	c 37	N74-27901 *	US-PATENT-CLASS-8-DIG.9	c 25	N86-25428 *
US-PATENT-CLASS-73-88.5	c 14	N70-34705 *	US-PATENT-CLASS-74-675	c 37	N79-20377 *	US-PATENT-CLASS-8-115.5	c 27	N80-26446 *
US-PATENT-CLASS-73-88.5	c 14	N70-34799 *	US-PATENT-CLASS-74-705	c 37	N74-27901 *	US-PATENT-CLASS-8-150	c 09	N82-29330 *
US-PATENT-CLASS-73-88.5	c 14	N71-17656 *	US-PATENT-CLASS-74-710	c 37	N84-28084 *	US-PATENT-CLASS-8-3	c 51	N77-27677 *
US-PATENT-CLASS-73-88.5	c 14	N71-21091 *	US-PATENT-CLASS-74-753	c 37	N84-28084 *	US-PATENT-CLASS-8-94.11	c 51	N77-27677 *
US-PATENT-CLASS-73-88.5	c 14	N71-23087 *	US-PATENT-CLASS-74-758	c 37	N79-20377 *	US-PATENT-CLASS-8-94.12	c 18	N71-15545 *
US-PATENT-CLASS-73-88.5	c 14	N71-24233 *	US-PATENT-CLASS-74-764	c 37	N78-17385 *	US-PATENT-CLASS-81-119	c 37	N79-14383 *
US-PATENT-CLASS-73-88.5	c 09	N72-22200 *	US-PATENT-CLASS-74-800	c 37	N84-28084 *	US-PATENT-CLASS-81-177G	c 37	N85-21649 *
US-PATENT-CLASS-73-88.5	c 33	N75-31329 *	US-PATENT-CLASS-74-812	c 37	N78-16369 *	US-PATENT-CLASS-81-180B	c 37	N79-14383 *
US-PATENT-CLASS-73-88.5	c 38	N76-28563 *	US-PATENT-CLASS-74-81	c 37	N75-13266 *	US-PATENT-CLASS-81-3R	c 15	N71-29133 *
US-PATENT-CLASS-73-88A	c 32	N73-20740 *	US-PATENT-CLASS-74-820	c 37	N78-16369 *	US-PATENT-CLASS-81-55	c 37	N83-36482 *
US-PATENT-CLASS-73-88B	c 39	N78-15512 *	US-PATENT-CLASS-74-83	c 37	N71-26635 *	US-PATENT-CLASS-81-56	c 37	N76-20480 *
US-PATENT-CLASS-73-88R	c 35	N74-13129 *	US-PATENT-CLASS-74-89.15	c 15	N72-21462 *	US-PATENT-CLASS-81-57.31	c 37	N76-20480 *
US-PATENT-CLASS-73-88R	c 35	N77-22449 *	US-PATENT-CLASS-74-89.15	c 15	N71-23809 *	US-PATENT-CLASS-81-57.38	c 15	N73-30457 *
US-PATENT-CLASS-73-88R	c 39	N77-28511 *	US-PATENT-CLASS-74-89.18	c 15	N81-33483 *	US-PATENT-CLASS-81-57.38	c 37	N83-36482 *
US-PATENT-CLASS-73-88	c 32	N71-17645 *	US-PATENT-CLASS-74-89	c 37	N77-22482 *	US-PATENT-CLASS-81-59.5R	c 37	N79-10419 *
US-PATENT-CLASS-73-88	c 32	N70-42003 *	US-PATENT-CLASS-74-96	c 37	N72-22530 *	US-PATENT-CLASS-82-1.2	c 37	N79-14383 *
US-PATENT-CLASS-73-90	c 32	N71-25360 *	US-PATENT-CLASS-75-5B	c 17	N75-26371 *	US-PATENT-CLASS-82-1C	c 37	N81-14319 *
US-PATENT-CLASS-73-90	c 14	N73-20476 *	US-PATENT-CLASS-75-DIG.1	c 18	N72-25448 *	US-PATENT-CLASS-82-124	c 15	N71-22722 *
US-PATENT-CLASS-73-91	c 14	N73-20476 *	US-PATENT-CLASS-75-DIG.1	c 37	N78-18182 *	US-PATENT-CLASS-82-24R	c 14	N72-16283 *
US-PATENT-CLASS-73-91	c 32	N73-26910 *	US-PATENT-CLASS-75-122.7	c 37	N80-32484 *	US-PATENT-CLASS-82-36R	c 37	N81-14319 *
US-PATENT-CLASS-73-91	c 09	N74-19528 *	US-PATENT-CLASS-75-126D	c 26	N78-18182 *	US-PATENT-CLASS-82-90	c 37	N85-21650 *
US-PATENT-CLASS-73-94	c 14	N73-32323 *	US-PATENT-CLASS-75-126F	c 26	N78-18182 *	US-PATENT-CLASS-83-152	c 76	N80-18951 *
US-PATENT-CLASS-73-95	c 15	N71-24834 *	US-PATENT-CLASS-75-128G	c 26	N78-18182 *	US-PATENT-CLASS-83-451	c 37	N77-14478 *
US-PATENT-CLASS-73-95	c 14	N72-11364 *	US-PATENT-CLASS-75-128T	c 26	N79-16678 *	US-PATENT-CLASS-83-452	c 39	N74-13131 *
US-PATENT-CLASS-73-95	c 35	N76-18400 *	US-PATENT-CLASS-75-134D	c 76	N73-32437 *	US-PATENT-CLASS-83-467R	c 37	N77-14478 *
US-PATENT-CLASS-73-95	c 35	N77-22450 *	US-PATENT-CLASS-75-135	c 18	N77-27187 *	US-PATENT-CLASS-83-467	c 15	N71-22798 *
US-PATENT-CLASS-73-95	c 31	N79-11246 *	US-PATENT-CLASS-75-135	c 24	N80-23419 *	US-PATENT-CLASS-83-522	c 15	N72-27485 *
US-PATENT-CLASS-73-97	c 14	N71-15600 *	US-PATENT-CLASS-75-138	c 26	N80-23419 *	US-PATENT-CLASS-83-562	c 15	N72-27485 *
US-PATENT-CLASS-73-99	c 14	N71-10781 *	US-PATENT-CLASS-75-139	c 24	N77-27187 *	US-PATENT-CLASS-83-588	c 15	N72-27485 *
US-PATENT-CLASS-73-9	c 14	N71-22995 *	US-PATENT-CLASS-75-142	c 17	N71-20743 *	US-PATENT-CLASS-83-602	c 39	N74-13131 *
US-PATENT-CLASS-73-9	c 35	N76-31489 *	US-PATENT-CLASS-75-170	c 17	N71-15644 *	US-PATENT-CLASS-83-664	c 37	N85-21650 *
US-PATENT-CLASS-73-9	c 15	N84-16231 *	US-PATENT-CLASS-75-170	c 17	N71-16025 *	US-PATENT-CLASS-83-676	c 37	N85-21650 *
US-PATENT-CLASS-73-9	c 37	N78-31426 *	US-PATENT-CLASS-75-170	c 17	N71-23248 *	US-PATENT-CLASS-83-870	c 37	N80-29703 *
US-PATENT-CLASS-74-100	c 15	N71-24045 *	US-PATENT-CLASS-75-170	c 17	N72-22535 *		c 76	N80-18951 *
US-PATENT-CLASS-74-105	c 09	N72-22195 *						
US-PATENT-CLASS-74-110	c 44	N83-14693 *						
US-PATENT-CLASS-74-126	c 15	N71-21529 *						



US-PATENT-CLASS-83-8	c 15	N72-27485 *	#	US-PATENT-CLASS-95-89R	c 35	N74-15831 *	#	US-PATENT-3,108,171	c 33	N70-34812 *	#
US-PATENT-CLASS-83-917	c 39	N74-13131 *	#	US-PATENT-CLASS-96-27R	c 35	N79-10389 *	#	US-PATENT-3,110,318	c 12	N70-38997 *	#
US-PATENT-CLASS-85-1	c 15	N72-22488 *	#	US-PATENT-CLASS-96-36.2	c 06	N72-21094 *	#	US-PATENT-3,112,672	c 11	N70-38202 *	#
US-PATENT-CLASS-85-33	c 15	N71-15922 *	#	US-PATENT-CLASS-96-36.2	c 15	N72-25452 *	#	US-PATENT-3,115,630	c 31	N70-37981 *	#
US-PATENT-CLASS-85-33	c 15	N71-21489 *	#	US-PATENT-CLASS-96-38.3	c 35	N74-26946 *	#	US-PATENT-3,118,100	c 03	N71-29129 *	#
US-PATENT-CLASS-85-3	c 15	N71-17653 *	#	US-PATENT-CLASS-96-49	c 14	N71-17574 *	#	US-PATENT-3,119,086	c 35	N79-33449 *	#
US-PATENT-CLASS-85-5B	c 15	N72-11385 *	#	US-PATENT-CLASS-96-60R	c 35	N79-10389 *	#	US-PATENT-3,119,232	c 28	N70-37980 *	#
US-PATENT-CLASS-85-7	c 15	N71-23254 *	#	US-PATENT-CLASS-96-79	c 35	N74-26946 *	#	US-PATENT-3,120,101	c 28	N70-34860 *	#
US-PATENT-CLASS-859R	c 27	N81-15104 *	#	US-PATENT-CLASS-96-87A	c 27	N78-14164 *	#	US-PATENT-3,120,361	c 31	N70-38010 *	#
US-PATENT-CLASS-86-1R	c 28	N77-10213 *	#	US-PATENT-CLASS-96-90PC	c 14	N72-22443 *	#	US-PATENT-3,120,738	c 28	N70-38249 *	#
US-PATENT-CLASS-86-1R	c 20	N77-17143 *	#	US-PATENT-CLASS-98-1.5	c 44	N78-32539 *	#	US-PATENT-3,121,309	c 28	N70-35381 *	#
US-PATENT-CLASS-86-1	c 28	N71-26779 *	#	US-PATENT-CLASS-98-1	c 54	N78-17679 *	#	US-PATENT-3,122,000	c 15	N70-38020 *	#
US-PATENT-CLASS-86-20.2	c 28	N71-26779 *	#	US-PATENT-CLASS-98-39	c 31	N74-27902 *	#	US-PATENT-3,122,098	c 28	N70-38181 *	#
US-PATENT-CLASS-86-20R	c 20	N77-17143 *	#	US-PATENT-CLASS-99-80PS	c 05	N72-33096 *	#	US-PATENT-3,122,885	c 28	N70-38710 *	#
US-PATENT-CLASS-88-14	c 14	N70-34298 *	#	US-PATENT-DES-228,688	c 05	N74-10907 *	#	US-PATENT-3,123,248	c 11	N70-38182 *	#
US-PATENT-CLASS-88-14	c 14	N70-40003 *	#	US-PATENT-RE-26,548	c 07	N71-12389 *	#	US-PATENT-3,123,692	c 37	N79-33467 *	#
US-PATENT-CLASS-88-14	c 14	N70-41946 *	#	US-PATENT-RE-28,921	c 52	N76-30793 *	#	US-PATENT-3,123,692	c 33	N79-33393 *	#
US-PATENT-CLASS-88-14	c 14	N70-41955 *	#	US-PATENT-2,837,706	c 15	N71-28952 *	#	US-PATENT-3,127,157	c 15	N70-38225 *	#
US-PATENT-CLASS-88-14	c 09	N71-22999 *	#	US-PATENT-2,898,889	c 02	N71-29128 *	#	US-PATENT-3,128,389	c 09	N70-38604 *	#
US-PATENT-CLASS-88-16	c 14	N70-33254 *	#	US-PATENT-2,903,307	c 15	N71-29136 *	#	US-PATENT-3,128,845	c 15	N70-38601 *	#
US-PATENT-CLASS-88-1	c 21	N70-35427 *	#	US-PATENT-2,926,123	c 33	N71-29151 *	#	US-PATENT-3,130,940	c 33	N70-33344 *	#
US-PATENT-CLASS-88-1	c 21	N71-22880 *	#	US-PATENT-2,934,331	c 15	N70-33382 *	#	US-PATENT-3,131,040	c 37	N79-21345 *	#
US-PATENT-CLASS-88-24	c 23	N71-21882 *	#	US-PATENT-2,940,259	c 28	N70-33241 *	#	US-PATENT-3,132,342	c 07	N70-38200 *	#
US-PATENT-CLASS-89-1.5G	c 08	N82-32373 *	#	US-PATENT-2,944,316	c 15	N71-16076 *	#	US-PATENT-3,132,476	c 28	N70-34294 *	#
US-PATENT-CLASS-89-1.5G	c 37	N85-30334 *	#	US-PATENT-2,945,667	c 15	N70-33376 *	#	US-PATENT-3,132,903	c 15	N71-28951 *	#
US-PATENT-CLASS-89-1.5	c 31	N71-15675 *	#	US-PATENT-2,956,772	c 33	N71-29152 *	#	US-PATENT-3,135,089	c 15	N70-38620 *	#
US-PATENT-CLASS-89-1.5	c 15	N71-24600 *	#	US-PATENT-2,960,002	c 14	N70-41946 *	#	US-PATENT-3,135,090	c 37	N79-33468 *	#
US-PATENT-CLASS-89-1.7	c 11	N70-38202 *	#	US-PATENT-2,971,837	c 17	N70-33383 *	#	US-PATENT-3,135,090	c 28	N70-38504 *	#
US-PATENT-CLASS-89-1.7	c 30	N70-40353 *	#	US-PATENT-2,974,925	c 28	N70-33372 *	#	US-PATENT-3,136,123	c 28	N70-38199 *	#
US-PATENT-CLASS-89-1.7	c 03	N71-12258 *	#	US-PATENT-2,984,735	c 11	N70-33329 *	#	US-PATENT-3,138,837	c 17	N70-38198 *	#
US-PATENT-CLASS-89-1.7	c 03	N71-12259 *	#	US-PATENT-2,991,671	c 15	N70-33330 *	#	US-PATENT-3,139,725	c 28	N70-38645 *	#
US-PATENT-CLASS-89-1.801	c 20	N76-22296 *	#	US-PATENT-2,991,961	c 02	N70-33332 *	#	US-PATENT-3,140,728	c 15	N70-36908 *	#
US-PATENT-CLASS-89-1.806	c 15	N71-24043 *	#	US-PATENT-2,996,212	c 31	N71-17680 *	#	US-PATENT-3,141,340	c 11	N70-38196 *	#
US-PATENT-CLASS-89-1.811	c 15	N72-17455 *	#	US-PATENT-2,997,274	c 28	N71-29154 *	#	US-PATENT-3,141,769	c 28	N70-38197 *	#
US-PATENT-CLASS-89-1B	c 01	N83-35992 *	#	US-PATENT-3,001,363	c 28	N70-33331 *	#	US-PATENT-3,141,932	c 03	N70-38713 *	#
US-PATENT-CLASS-89-1	c 03	N70-34667 *	#	US-PATENT-3,001,395	c 14	N70-33386 *	#	US-PATENT-3,143,321	c 15	N70-34850 *	#
US-PATENT-CLASS-89-1	c 15	N71-16078 *	#	US-PATENT-3,001,739	c 03	N70-33343 *	#	US-PATENT-3,144,219	c 14	N70-40240 *	#
US-PATENT-CLASS-89-8	c 11	N71-18578 *	#	US-PATENT-3,004,189	c 37	N75-29426 *	#	US-PATENT-3,144,999	c 31	N70-38676 *	#
US-PATENT-CLASS-89-8	c 11	N73-32152 *	#	US-PATENT-3,004,735	c 03	N70-33322 *	#	US-PATENT-3,145,874	c 02	N70-34856 *	#
US-PATENT-CLASS-89-8	c 75	N76-14931 *	#	US-PATENT-3,005,081	c 14	N70-33322 *	#	US-PATENT-3,147,422	c 11	N71-15960 *	#
US-PATENT-CLASS-89-8	c 75	N76-17951 *	#	US-PATENT-3,005,339	c 09	N70-33312 *	#	US-PATENT-3,149,897	c 09	N70-38712 *	#
US-PATENT-CLASS-89-8	c 09	N79-21084 *	#	US-PATENT-3,008,229	c 11	N70-33287 *	#	US-PATENT-3,150,329	c 09	N70-36494 *	#
US-PATENT-CLASS-9-11A	c 02	N73-26006 *	#	US-PATENT-3,010,372	c 15	N70-33311 *	#	US-PATENT-3,150,329	c 09	N70-38995 *	#
US-PATENT-CLASS-9-11A	c 54	N74-14845 *	#	US-PATENT-3,011,760	c 15	N70-33180 *	#	US-PATENT-3,150,377	c 03	N70-36778 *	#
US-PATENT-CLASS-9-11	c 05	N70-34857 *	#	US-PATENT-3,012,400	c 15	N70-33226 *	#	US-PATENT-3,152,344	c 05	N70-36493 *	#
US-PATENT-CLASS-9-2A	c 02	N73-26006 *	#	US-PATENT-3,012,407	c 28	N70-33374 *	#	US-PATENT-3,155,992	c 05	N70-34857 *	#
US-PATENT-CLASS-9-312	c 05	N71-22748 *	#	US-PATENT-3,016,693	c 15	N70-33323 *	#	US-PATENT-3,156,090	c 28	N70-37245 *	#
US-PATENT-CLASS-9-316	c 05	N70-36493 *	#	US-PATENT-3,016,693	c 12	N70-33356 *	#	US-PATENT-3,157,529	c 18	N70-36400 *	#
US-PATENT-CLASS-9-3	c 02	N73-26006 *	#	US-PATENT-3,016,863	c 28	N70-33356 *	#	US-PATENT-3,158,172	c 15	N70-34817 *	#
US-PATENT-CLASS-9-8	c 03	N70-36778 *	#	US-PATENT-3,022,672	c 12	N70-33305 *	#	US-PATENT-3,158,336	c 31	N70-36410 *	#
US-PATENT-CLASS-9-9	c 15	N71-24600 *	#	US-PATENT-3,022,672	c 14	N70-34816 *	#	US-PATENT-3,158,764	c 03	N70-36803 *	#
US-PATENT-CLASS-90-11	c 15	N71-33518 *	#	US-PATENT-3,024,659	c 14	N70-34820 *	#	US-PATENT-3,159,967	c 28	N70-36802 *	#
US-PATENT-CLASS-90-12.5	c 37	N74-25968 *	#	US-PATENT-3,028,122	c 02	N70-33286 *	#	US-PATENT-3,160,825	c 14	N70-35220 *	#
US-PATENT-CLASS-90-12	c 15	N71-22799 *	#	US-PATENT-3,028,126	c 21	N70-33279 *	#	US-PATENT-3,160,950	c 15	N70-36409 *	#
US-PATENT-CLASS-901-25	c 37	N86-20789 *	#	US-PATENT-3,028,128	c 31	N70-33242 *	#	US-PATENT-3,162,012	c 15	N70-36411 *	#
US-PATENT-CLASS-901-31	c 37	N86-19603 *	#	US-PATENT-3,035,333	c 28	N70-41818 *	#	US-PATENT-3,163,935	c 14	N70-36907 *	#
US-PATENT-CLASS-901-31	c 37	N86-20789 *	#	US-PATENT-3,038,077	c 21	N70-33181 *	#	US-PATENT-3,164,222	c 15	N70-34861 *	#
US-PATENT-CLASS-901-42	c 37	N86-21850 *	#	US-PATENT-3,038,175	c 05	N70-33285 *	#	US-PATENT-3,164,369	c 15	N70-36412 *	#
US-PATENT-CLASS-901-47	c 37	N86-21850 *	#	US-PATENT-3,041,587	c 14	N70-33179 *	#	US-PATENT-3,166,356	c 05	N70-35152 *	#
US-PATENT-CLASS-901-50	c 37	N86-19603 *	#	US-PATENT-3,041,924	c 14	N70-33254 *	#	US-PATENT-3,166,834	c 15	N70-36901 *	#
US-PATENT-CLASS-91-186	c 05	N73-32014 *	#	US-PATENT-3,045,424	c 28	N70-40367 *	#	US-PATENT-3,167,426	c 17	N70-36616 *	#
US-PATENT-CLASS-91-325	c 37	N81-32510 *	#	US-PATENT-3,049,876	c 28	N70-33284 *	#	US-PATENT-3,168,827	c 14	N70-36807 *	#
US-PATENT-CLASS-91-341R	c 37	N81-32510 *	#	US-PATENT-3,053,484	c 02	N70-33255 *	#	US-PATENT-3,169,001	c 02	N70-36825 *	#
US-PATENT-CLASS-91-361	c 15	N71-27754 *	#	US-PATENT-3,057,597	c 15	N70-33264 *	#	US-PATENT-3,169,613	c 15	N70-36947 *	#
US-PATENT-CLASS-91-363A	c 15	N73-13466 *	#	US-PATENT-3,059,220	c 09	N70-33182 *	#	US-PATENT-3,169,725	c 15	N70-36947 *	#
US-PATENT-CLASS-91-390	c 15	N71-27147 *	#	US-PATENT-3,063,291	c 11	N70-33278 *	#	US-PATENT-3,170,286	c 31	N70-34296 *	#
US-PATENT-CLASS-91-390	c 15	N71-27754 *	#	US-PATENT-3,064,928	c 02	N70-33266 *	#	US-PATENT-3,170,290	c 15	N70-36535 *	#
US-PATENT-CLASS-91-410	c 37	N81-32510 *	#	US-PATENT-3,067,573	c 02	N70-33266 *	#	US-PATENT-3,170,290	c 28	N70-36910 *	#
US-PATENT-CLASS-91-448	c 15	N71-27754 *	#	US-PATENT-3,068,658	c 28	N70-39899 *	#	US-PATENT-3,170,295	c 27	N71-28929 *	#
US-PATENT-CLASS-91-448	c 15	N73-13466 *	#	US-PATENT-3,068,658	c 15	N70-34247 *	#	US-PATENT-3,170,324	c 14	N70-36824 *	#
US-PATENT-CLASS-91-461	c 15	N71-27147 *	#	US-PATENT-3,069,123	c 14	N70-39898 *	#	US-PATENT-3,170,373	c 24	N70-36824 *	#
US-PATENT-CLASS-92-130R	c 37	N81-33483 *	#	US-PATENT-3,070,330	c 21	N70-34539 *	#	US-PATENT-3,170,471	c 32	N70-36536 *	#
US-PATENT-CLASS-92-37	c 37	N82-24493 *	#	US-PATENT-3,070,349	c 28	N70-39895 *	#	US-PATENT-3,170,486	c 15	N70-36492 *	#
US-PATENT-CLASS-92-49	c 14	N73-13418 *	#	US-PATENT-3,070,407	c 15	N70-39896 *	#	US-PATENT-3,170,605	c 15	N70-38996 *	#
US-PATENT-CLASS-92-94	c 32	N70-41370 *	#	US-PATENT-3,072,574	c 18	N70-39897 *	#	US-PATENT-3,170,657	c 02	N70-34858 *	#
US-PATENT-CLASS-92-98R	c 31	N85-21404 *	#	US-PATENT-3,076,065	c 09	N70-39915 *	#	US-PATENT-3,170,660	c 02	N70-36804 *	#
US-PATENT-CLASS-93-1	c 15	N70-33180 *	#	US-PATENT-3,077,599	c 07	N70-40202 *	#	US-PATENT-3,171,073	c 17	N70-33288 *	#
US-PATENT-CLASS-94-9N	c 27	N81-15104 *	#	US-PATENT-3,079,113	c 02	N70-38009 *	#	US-PATENT-3,171,081	c 25	N70-33267 *	#
US-PATENT-CLASS-95-1.1	c 14	N72-18411 *	#	US-PATENT-3,080,711	c 28	N70-38711 *	#	US-PATENT-3,171,081	c 14	N70-35666 *	#
US-PATENT-CLASS-95-1.1	c 14	N73-26431 *	#	US-PATENT-3,083,611	c 21	N70-35427 *	#	US-PATENT-3,172,097	c 08	N70-35423 *	#
US-PATENT-CLASS-95-11.5R	c 14	N73-19419 *	#	US-PATENT-3,084,421	c 17	N70-38490 *	#	US-PATENT-3,173,246	c 28	N70-33265 *	#
US-PATENT-CLASS-95-11.5	c 14	N73-32319 *	#	US-PATENT-3,085,165	c 09	N70-34819 *	#	US-PATENT-3,173,251	c 28	N70-33375 *	#
US-PATENT-CLASS-95-11R	c 14	N73-19419 *	#	US-PATENT-3,087,692	c 02	N70-34178 *	#	US-PATENT-3,173,801	c 32	N79-19186 *	#
US-PATENT-CLASS-95-11	c 14	N71-18465 *	#	US-PATENT-3,088,441	c 15	N70-35409 *	#	US-PATENT-3,174,278	c 25	N70-36946 *	#
US-PATENT-CLASS-95-11	c 16	N71-33410 *	#	US-PATENT-3,090,212	c 33	N70-37979 *	#	US-PATENT-3,174,827	c 28	N70-36806 *	#
US-PATENT-CLASS-95-11	c 14	N73-32319 *	#	US-PATENT-3,090,580	c 31	N70-37924 *	#	US-PATENT-3,175,789	c 26	N70-36805 *	#
US-PATENT-CLASS-95-12.5	c 31	N72-25842 *	#	US-PATENT-3,093,000	c 15	N70-37925 *	#	US-PATENT-3,175,789	c 31	N70-36654 *	#
US-PATENT-CLASS-95-12.5	c 14	N73-14427 *	#	US-PATENT-3,093,346	c 31	N70-37938 *	#	US-PATENT-3,176,222	c 14	N70-36618 *	#
US-PATENT-CLASS-95-12	c 14	N73-33									

US-PATENT-3,185,023	c 14	N70-34298 *	US-PATENT-3,233,862	c 37	N79-33469 *	US-PATENT-3,282,035	c 11	N71-10777 *
US-PATENT-3,187,583	c 11	N70-38675 *	US-PATENT-3,236,066	c 15	N71-28959 *	US-PATENT-3,282,091	c 14	N71-10781 *
US-PATENT-3,188,472	c 21	N70-34297 *	US-PATENT-3,237,253	c 15	N71-15986 *	US-PATENT-3,282,532	c 31	N71-17729 *
US-PATENT-3,188,844	c 15	N70-34249 *	US-PATENT-3,238,345	c 11	N71-15925 *	US-PATENT-3,282,541	c 31	N71-24750 *
US-PATENT-3,189,299	c 21	N70-34295 *	US-PATENT-3,238,413	c 25	N71-28184 *	US-PATENT-3,282,739	c 03	N71-11053 *
US-PATENT-3,189,535	c 15	N70-34967 *	US-PATENT-3,238,715	c 28	N71-14043 *	US-PATENT-3,282,740	c 03	N71-11051 *
US-PATENT-3,189,726	c 33	N70-34545 *	US-PATENT-3,238,730	c 03	N71-12280 *	US-PATENT-3,283,068	c 10	N71-15909 *
US-PATENT-3,189,784	c 33	N75-27250 *	US-PATENT-3,238,774	c 14	N71-14996 *	US-PATENT-3,283,175	c 10	N71-15910 *
US-PATENT-3,189,794	c 09	N70-34502 *	US-PATENT-3,238,777	c 14	N71-15598 *	US-PATENT-3,283,241	c 14	N71-16014 *
US-PATENT-3,189,864	c 09	N70-34596 *	US-PATENT-3,239,660	c 23	N71-30292 *	US-PATENT-3,286,274	c 05	N71-12535 *
US-PATENT-3,190,124	c 35	N79-33450 *	US-PATENT-3,242,716	c 14	N71-15992 *	US-PATENT-3,286,531	c 30	N71-17788 *
US-PATENT-3,191,316	c 31	N70-34966 *	US-PATENT-3,243,154	c 23	N71-15673 *	US-PATENT-3,286,629	c 31	N71-17730 *
US-PATENT-3,191,379	c 27	N70-35534 *	US-PATENT-3,243,791	c 07	N71-11298 *	US-PATENT-3,286,630	c 31	N71-10582 *
US-PATENT-3,191,907	c 15	N70-34859 *	US-PATENT-3,244,943	c 15	N73-28518 *	US-PATENT-3,286,882	c 27	N71-29155 *
US-PATENT-3,192,730	c 06	N70-34946 *	US-PATENT-3,249,012	c 03	N71-12258 *	US-PATENT-3,286,953	c 21	N70-18556 *
US-PATENT-3,193,883	c 27	N70-34783 *	US-PATENT-3,249,013	c 03	N71-12259 *	US-PATENT-3,286,957	c 02	N70-18663 *
US-PATENT-3,194,060	c 14	N70-34794 *	US-PATENT-3,251,053	c 08	N71-12501 *	US-PATENT-3,287,031	c 15	N70-18008 *
US-PATENT-3,194,525	c 11	N70-35383 *	US-PATENT-3,252,100	c 10	N71-28980 *	US-PATENT-3,287,174	c 03	N70-18664 *
US-PATENT-3,194,951	c 08	N70-34778 *	US-PATENT-3,254,395	c 28	N71-15658 *	US-PATENT-3,287,496	c 14	N70-18007 *
US-PATENT-3,196,281	c 08	N70-34787 *	US-PATENT-3,254,487	c 28	N71-15659 *	US-PATENT-3,287,582	c 28	N70-15176 *
US-PATENT-3,196,362	c 09	N70-35440 *	US-PATENT-3,257,780	c 15	N71-15968 *	US-PATENT-3,287,640	c 09	N70-18555 *
US-PATENT-3,196,557	c 11	N70-34815 *	US-PATENT-3,258,582	c 02	N71-13421 *	US-PATENT-3,287,660	c 18	N70-15178 *
US-PATENT-3,196,558	c 14	N70-35394 *	US-PATENT-3,258,687	c 14	N71-15962 *	US-PATENT-3,287,725	c 07	N70-18680 *
US-PATENT-3,196,598	c 28	N70-34788 *	US-PATENT-3,258,831	c 15	N71-15986 *	US-PATENT-3,289,205	c 07	N70-16178 *
US-PATENT-3,196,675	c 14	N70-34818 *	US-PATENT-3,258,912	c 27	N71-15634 *	US-PATENT-3,295,360	c 14	N70-16181 *
US-PATENT-3,196,690	c 11	N70-34786 *	US-PATENT-3,258,918	c 27	N71-15635 *	US-PATENT-3,295,366	c 11	N70-16177 *
US-PATENT-3,197,616	c 14	N71-28958 *	US-PATENT-3,260,055	c 23	N71-15467 *	US-PATENT-3,295,377	c 14	N70-16182 *
US-PATENT-3,198,955	c 08	N70-34743 *	US-PATENT-3,260,204	c 31	N71-15692 *	US-PATENT-3,295,386	c 05	N70-15181 *
US-PATENT-3,198,994	c 26	N73-28710 *	US-PATENT-3,260,326	c 11	N71-28779 *	US-PATENT-3,295,512	c 03	N70-15180 *
US-PATENT-3,199,340	c 14	N70-34799 *	US-PATENT-3,261,210	c 14	N71-15969 *	US-PATENT-3,295,545	c 15	N70-16166 *
US-PATENT-3,199,343	c 11	N70-34844 *	US-PATENT-3,262,025	c 15	N73-32361 *	US-PATENT-3,295,556	c 32	N70-15179 *
US-PATENT-3,199,931	c 15	N70-34664 *	US-PATENT-3,262,186	c 15	N71-16052 *	US-PATENT-3,295,594	c 54	N82-29002 *
US-PATENT-3,200,706	c 03	N70-34667 *	US-PATENT-3,262,262	c 28	N71-15661 *	US-PATENT-3,295,684	c 28	N70-14447 *
US-PATENT-3,201,560	c 33	N70-34540 *	US-PATENT-3,262,351	c 15	N71-15922 *	US-PATENT-3,295,699	c 32	N70-41367 *
US-PATENT-3,201,635	c 25	N70-34661 *	US-PATENT-3,262,365	c 31	N71-15675 *	US-PATENT-3,295,782	c 14	N70-41647 *
US-PATENT-3,201,980	c 14	N70-40203 *	US-PATENT-3,262,395	c 15	N71-30028 *	US-PATENT-3,295,790	c 31	N70-41588 *
US-PATENT-3,202,381	c 31	N70-34176 *	US-PATENT-3,262,518	c 05	N71-11199 *	US-PATENT-3,295,798	c 02	N70-41589 *
US-PATENT-3,202,398	c 28	N71-28928 *	US-PATENT-3,262,655	c 31	N71-15663 *	US-PATENT-3,295,808	c 15	N70-41310 *
US-PATENT-3,202,844	c 03	N70-34134 *	US-PATENT-3,262,694	c 44	N79-19447 *	US-PATENT-3,296,060	c 18	N70-41583 *
US-PATENT-3,202,915	c 14	N70-38602 *	US-PATENT-3,263,016	c 33	N71-15625 *	US-PATENT-3,296,526	c 14	N70-41332 *
US-PATENT-3,202,998	c 31	N70-34135 *	US-PATENT-3,263,171	c 09	N71-13530 *	US-PATENT-3,296,531	c 07	N70-41331 *
US-PATENT-3,204,447	c 14	N70-34156 *	US-PATENT-3,263,610	c 15	N71-13789 *	US-PATENT-3,298,175	c 33	N71-29053 *
US-PATENT-3,204,889	c 03	N70-34157 *	US-PATENT-3,264,135	c 15	N71-16075 *	US-PATENT-3,298,182	c 28	N70-41311 *
US-PATENT-3,205,361	c 14	N70-34158 *	US-PATENT-3,270,441	c 11	N71-16028 *	US-PATENT-3,298,221	c 14	N70-41330 *
US-PATENT-3,205,362	c 21	N70-35089 *	US-PATENT-3,270,499	c 28	N71-15660 *	US-PATENT-3,298,285	c 32	N70-41370 *
US-PATENT-3,205,381	c 03	N70-35408 *	US-PATENT-3,270,501	c 31	N71-15647 *	US-PATENT-3,298,362	c 05	N70-41329 *
US-PATENT-3,206,141	c 21	N70-35395 *	US-PATENT-3,270,503	c 33	N71-15623 *	US-PATENT-3,298,582	c 14	N71-28935 *
US-PATENT-3,206,897	c 18	N75-27040 *	US-PATENT-3,270,504	c 31	N71-15637 *	US-PATENT-3,299,364	c 16	N71-15550 *
US-PATENT-3,208,215	c 28	N70-34162 *	US-PATENT-3,270,505	c 21	N71-15582 *	US-PATENT-3,299,431	c 07	N71-28979 *
US-PATENT-3,208,272	c 14	N70-34161 *	US-PATENT-3,270,512	c 15	N71-15906 *	US-PATENT-3,299,813	c 15	N71-15918 *
US-PATENT-3,208,694	c 02	N70-34160 *	US-PATENT-3,270,565	c 14	N71-30265 *	US-PATENT-3,300,162	c 31	N70-41373 *
US-PATENT-3,208,707	c 31	N70-34159 *	US-PATENT-3,270,756	c 15	N71-15967 *	US-PATENT-3,300,731	c 07	N70-41372 *
US-PATENT-3,209,360	c 09	N70-35219 *	US-PATENT-3,270,802	c 33	N71-24876 *	US-PATENT-3,300,847	c 15	N70-41371 *
US-PATENT-3,209,361	c 09	N70-35425 *	US-PATENT-3,270,835	c 28	N70-41582 *	US-PATENT-3,300,949	c 05	N70-41297 *
US-PATENT-3,210,927	c 28	N70-34175 *	US-PATENT-3,270,908	c 31	N71-15664 *	US-PATENT-3,300,981	c 28	N70-41275 *
US-PATENT-3,211,169	c 15	N70-35087 *	US-PATENT-3,270,985	c 21	N71-15583 *	US-PATENT-3,301,046	c 14	N70-41366 *
US-PATENT-3,211,414	c 15	N70-35407 *	US-PATENT-3,270,986	c 05	N71-12336 *	US-PATENT-3,301,315	c 09	N70-41717 *
US-PATENT-3,212,096	c 09	N70-35382 *	US-PATENT-3,270,988	c 01	N71-13410 *	US-PATENT-3,301,507	c 31	N70-41631 *
US-PATENT-3,212,259	c 28	N71-29153 *	US-PATENT-3,270,989	c 02	N71-11041 *	US-PATENT-3,301,511	c 02	N70-41630 *
US-PATENT-3,212,325	c 14	N70-34705 *	US-PATENT-3,270,990	c 28	N71-15583 *	US-PATENT-3,301,578	c 15	N70-41629 *
US-PATENT-3,212,564	c 33	N71-29052 *	US-PATENT-3,271,140	c 17	N71-15644 *	US-PATENT-3,302,023	c 14	N70-41676 *
US-PATENT-3,215,313	c 31	N79-21225 *	US-PATENT-3,271,181	c 15	N71-16077 *	US-PATENT-3,302,040	c 09	N70-41675 *
US-PATENT-3,215,572	c 12	N70-40124 *	US-PATENT-3,271,532	c 09	N71-16089 *	US-PATENT-3,302,569	c 15	N70-41679 *
US-PATENT-3,215,842	c 16	N71-28963 *	US-PATENT-3,271,558	c 15	N71-15871 *	US-PATENT-3,302,633	c 05	N70-41819 *
US-PATENT-3,216,007	c 08	N70-40125 *	US-PATENT-3,271,594	c 10	N71-28739 *	US-PATENT-3,302,662	c 15	N70-41811 *
US-PATENT-3,217,624	c 14	N70-40273 *	US-PATENT-3,271,620	c 09	N71-12540 *	US-PATENT-3,302,960	c 15	N70-41829 *
US-PATENT-3,218,479	c 09	N70-40272 *	US-PATENT-3,271,637	c 26	N71-18064 *	US-PATENT-3,303,304	c 14	N70-41812 *
US-PATENT-3,218,547	c 09	N70-40123 *	US-PATENT-3,271,649	c 10	N71-16030 *	US-PATENT-3,304,028	c 31	N70-41855 *
US-PATENT-3,218,850	c 14	N70-40400 *	US-PATENT-3,273,091	c 23	N71-29049 *	US-PATENT-3,304,718	c 28	N70-41922 *
US-PATENT-3,219,250	c 15	N70-40204 *	US-PATENT-3,273,355	c 33	N71-17897 *	US-PATENT-3,304,724	c 31	N70-41948 *
US-PATENT-3,219,365	c 15	N71-28937 *	US-PATENT-3,273,381	c 32	N71-17645 *	US-PATENT-3,304,729	c 31	N70-41871 *
US-PATENT-3,219,997	c 08	N73-28045 *	US-PATENT-3,273,388	c 09	N71-16086 *	US-PATENT-3,304,768	c 32	N70-42003 *
US-PATENT-3,220,004	c 30	N70-40309 *	US-PATENT-3,273,392	c 23	N71-17802 *	US-PATENT-3,304,773	c 14	N70-41957 *
US-PATENT-3,221,547	c 14	N70-40201 *	US-PATENT-3,273,399	c 12	N71-24692 *	US-PATENT-3,304,799	c 03	N70-41954 *
US-PATENT-3,221,549	c 14	N70-40157 *	US-PATENT-3,274,304	c 26	N71-17818 *	US-PATENT-3,304,865	c 28	N70-41967 *
US-PATENT-3,223,374	c 15	N70-40156 *	US-PATENT-3,275,794	c 37	N75-27376 *	US-PATENT-3,305,415	c 27	N70-41897 *
US-PATENT-3,224,001	c 07	N70-40063 *	US-PATENT-3,276,251	c 11	N71-15926 *	US-PATENT-3,305,636	c 08	N70-41961 *
US-PATENT-3,224,173	c 15	N70-40062 *	US-PATENT-3,276,376	c 31	N71-17629 *	US-PATENT-3,305,801	c 10	N70-41964 *
US-PATENT-3,224,263	c 15	N70-40180 *	US-PATENT-3,276,602	c 32	N71-17609 *	US-PATENT-3,305,810	c 09	N70-41929 *
US-PATENT-3,224,336	c 30	N70-40353 *	US-PATENT-3,276,679	c 15	N71-16079 *	US-PATENT-3,305,861	c 21	N70-41930 *
US-PATENT-3,224,337	c 09	N79-21084 *	US-PATENT-3,276,722	c 02	N71-16087 *	US-PATENT-3,305,870	c 07	N71-15907 *
US-PATENT-3,228,492	c 15	N70-40354 *	US-PATENT-3,276,726	c 31	N71-16081 *	US-PATENT-3,306,134	c 37	N78-17385 *
US-PATENT-3,228,558	c 14	N70-40233 *	US-PATENT-3,276,865	c 17	N71-16025 *	US-PATENT-3,308,848	c 12	N71-16031 *
US-PATENT-3,229,099	c 14	N70-40238 *	US-PATENT-3,276,866	c 17	N71-16026 *	US-PATENT-3,309,012	c 33	N71-17610 *
US-PATENT-3,229,102	c 14	N70-40239 *	US-PATENT-3,276,946	c 23	N71-15978 *	US-PATENT-3,309,961	c 15	N71-16078 *
US-PATENT-3,229,139	c 28	N70-39925 *	US-PATENT-3,277,314	c 10	N71-16042 *	US-PATENT-3,310,054	c 08	N71-15908 *
US-PATENT-3,229,155	c 25	N70-41628 *	US-PATENT-3,277,366	c 10	N71-16057 *	US-PATENT-3,310,138	c 12	N71-16894 *
US-PATENT-3,229,463	c 28	N70-39931 *	US-PATENT-3,277,373	c 07	N71-16088 *	US-PATENT-3,310,256	c 31	N71-17679 *
US-PATENT-3,229,568	c 14	N70-40003 *	US-PATENT-3,277,375	c 07	N71-11284 *	US-PATENT-3,310,261	c 31	N71-17691 *
US-PATENT-3,229,636	c 03	N70-39930 *	US-PATENT-3,277,458	c 10	N71-16058 *	US-PATENT-3,310,262	c 02	N71-11038 *
US-PATENT-3,229,682	c 09	N70-40234 *	US-PATENT-3,277,486	c 31	N71-10747 *	US-PATENT-3,310,443	c 02	N71-12243 *
US-PATENT-3,229,689	c 05	N70-39922 *	US-PATENT-3,279,193	c 33	N71-28852 *	US-PATENT-3,310,449	c 24	N71-10560 *
US-PATENT-3,229,884	c 15	N70-39924 *	US-PATENT-3,281,558	c 33	N75-27249 *	US-PATENT-3,310,683	c 14	N73-32324 *
US-PATENT-3,229,905	c 04	N78-17031 *	US-PATENT-3,281,963	c 11	N71-10746 *	US-PATENT-3,310,765	c 33	N79-21264 *
US-PATENT-3,229,930	c 30	N70-40016 *	US-PATENT-3,281,964	c 11	N71-10776 *	US-PATENT-3,310,798	c 14	N71-10616 *
US-PATENT-3,230,053	c 26	N70-40015 *	US-PATENT-3,281,965	c 11	N71-10748 *	US-PATENT-3,310,980	c 11	N71-10604 *

US-PATENT-3,311,315	c 07	N71-10609 *	#	US-PATENT-3,343,189	c 05	N71-22748 *	US-PATENT-3,373,640	c 15	N71-22722 *
US-PATENT-3,311,502	c 03	N71-10608 *	#	US-PATENT-3,344,340	c 09	N71-21449 *	US-PATENT-3,373,914	c 15	N71-23050 *
US-PATENT-3,311,510	c 26	N71-10607 *	#	US-PATENT-3,344,425	c 10	N71-21483 *	US-PATENT-3,374,339	c 08	N71-23059 *
US-PATENT-3,311,571	c 27	N79-21190 *	#	US-PATENT-3,345,820	c 28	N71-21822 *	US-PATENT-3,374,366	c 09	N71-23015 *
US-PATENT-3,311,748	c 21	N71-10678 *	#	US-PATENT-3,345,822	c 27	N71-21819 *	US-PATENT-3,374,830	c 33	N71-22890 *
US-PATENT-3,311,772	c 09	N71-10618 *	#	US-PATENT-3,345,840	c 15	N71-21536 *	US-PATENT-3,375,451	c 10	N71-22986 *
US-PATENT-3,311,832	c 07	N71-10775 *	#	US-PATENT-3,345,866	c 11	N71-21481 *	US-PATENT-3,375,479	c 15	N71-23049 *
US-PATENT-3,312,101	c 14	N71-10774 *	#	US-PATENT-3,346,419	c 03	N71-20895 *	US-PATENT-3,375,712	c 35	N75-29382 *
US-PATENT-3,312,204	c 28	N73-24783 *	#	US-PATENT-3,346,442	c 18	N71-21651 *	US-PATENT-3,375,885	c 15	N73-32362 *
US-PATENT-3,316,716	c 28	N71-10780 *	#	US-PATENT-3,346,515	c 06	N71-20905 *	US-PATENT-3,376,730	c 14	N71-22995 *
US-PATENT-3,316,752	c 14	N71-10779 *	#	US-PATENT-3,346,724	c 15	N71-21179 *	US-PATENT-3,377,208	c 14	N71-23039 *
US-PATENT-3,316,991	c 14	N71-10773 *	#	US-PATENT-3,346,806	c 14	N71-21090 *	US-PATENT-3,377,845	c 14	N71-22992 *
US-PATENT-3,317,180	c 15	N71-10778 *	#	US-PATENT-3,346,929	c 15	N71-21076 *	US-PATENT-3,378,315	c 15	N71-22997 *
US-PATENT-3,317,341	c 18	N71-10772 *	#	US-PATENT-3,347,046	c 33	N71-21507 *	US-PATENT-3,378,657	c 33	N79-33392 *
US-PATENT-3,317,352	c 03	N71-10728 *	#	US-PATENT-3,347,309	c 33	N71-29046 *	US-PATENT-3,378,851	c 05	N71-23096 *
US-PATENT-3,317,641	c 15	N71-10672 *	#	US-PATENT-3,347,465	c 18	N71-21068 *	US-PATENT-3,378,892	c 15	N71-22994 *
US-PATENT-3,317,731	c 21	N71-10771 *	#	US-PATENT-3,347,466	c 28	N71-21493 *	US-PATENT-3,379,052	c 14	N73-32321 *
US-PATENT-3,317,751	c 09	N71-10673 *	#	US-PATENT-3,347,531	c 15	N71-21177 *	US-PATENT-3,379,064	c 14	N71-23093 *
US-PATENT-3,317,797	c 10	N71-28783 *	#	US-PATENT-3,347,665	c 17	N71-20743 *	US-PATENT-3,379,330	c 23	N71-22881 *
US-PATENT-3,317,832	c 09	N71-10659 *	#	US-PATENT-3,348,048	c 14	N71-21088 *	US-PATENT-3,379,885	c 09	N71-22985 *
US-PATENT-3,318,093	c 15	N71-10658 *	#	US-PATENT-3,348,053	c 10	N71-20782 *	US-PATENT-3,379,974	c 14	N71-22990 *
US-PATENT-3,318,096	c 28	N71-28849 *	#	US-PATENT-3,348,152	c 10	N71-20841 *	US-PATENT-3,380,042	c 07	N71-23001 *
US-PATENT-3,318,343	c 15	N71-10809 *	#	US-PATENT-3,348,218	c 10	N71-29135 *	US-PATENT-3,380,049	c 10	N71-23099 *
US-PATENT-3,318,622	c 15	N71-10799 *	#	US-PATENT-3,349,814	c 33	N71-20834 *	US-PATENT-3,381,339	c 06	N71-22975 *
US-PATENT-3,319,175	c 09	N71-10798 *	#	US-PATENT-3,350,033	c 14	N71-21082 *	US-PATENT-3,381,517	c 09	N71-22988 *
US-PATENT-3,319,979	c 15	N71-10782 *	#	US-PATENT-3,350,034	c 31	N71-21064 *	US-PATENT-3,381,527	c 15	N71-22878 *
US-PATENT-3,320,669	c 15	N70-42017 *	#	US-PATENT-3,350,643	c 07	N71-20791 *	US-PATENT-3,381,569	c 21	N71-22880 *
US-PATENT-3,321,034	c 15	N70-42034 *	#	US-PATENT-3,350,671	c 09	N71-20842 *	US-PATENT-3,381,778	c 15	N71-22877 *
US-PATENT-3,321,154	c 31	N70-42075 *	#	US-PATENT-3,350,926	c 14	N71-21091 *	US-PATENT-3,382,082	c 18	N71-22998 *
US-PATENT-3,321,157	c 02	N70-42016 *	#	US-PATENT-3,352,157	c 14	N71-21072 *	US-PATENT-3,382,105	c 03	N71-29044 *
US-PATENT-3,321,159	c 31	N70-42015 *	#	US-PATENT-3,352,192	c 15	N71-21489 *	US-PATENT-3,382,107	c 03	N71-22974 *
US-PATENT-3,321,570	c 15	N70-41960 *	#	US-PATENT-3,352,774	c 37	N80-14395 *	US-PATENT-3,382,714	c 14	N71-22989 *
US-PATENT-3,321,628	c 10	N70-41991 *	#	US-PATENT-3,353,359	c 28	N71-20942 *	US-PATENT-3,383,461	c 07	N71-23026 *
US-PATENT-3,321,645	c 10	N70-42032 *	#	US-PATENT-3,354,098	c 06	N71-20717 *	US-PATENT-3,383,524	c 10	N71-23029 *
US-PATENT-3,321,922	c 28	N70-41992 *	#	US-PATENT-3,354,320	c 23	N71-21821 *	US-PATENT-3,383,903	c 14	N71-23036 *
US-PATENT-3,323,356	c 15	N70-41993 *	#	US-PATENT-3,354,462	c 14	N71-21006 *	US-PATENT-3,383,922	c 14	N71-22752 *
US-PATENT-3,323,362	c 14	N70-41994 *	#	US-PATENT-3,355,861	c 18	N71-20742 *	US-PATENT-3,384,016	c 31	N71-23008 *
US-PATENT-3,323,370	c 05	N70-42000 *	#	US-PATENT-3,355,948	c 14	N71-21007 *	US-PATENT-3,384,075	c 05	N71-22896 *
US-PATENT-3,323,386	c 03	N70-42073 *	#	US-PATENT-3,356,320	c 05	N71-20781 *	US-PATENT-3,384,111	c 15	N71-22706 *
US-PATENT-3,323,408	c 14	N70-41955 *	#	US-PATENT-3,356,549	c 15	N71-21404 *	US-PATENT-3,384,324	c 33	N71-22792 *
US-PATENT-3,323,484	c 14	N70-42074 *	#	US-PATENT-3,356,885	c 25	N71-20747 *	US-PATENT-3,384,820	c 09	N71-23021 *
US-PATENT-3,323,967	c 15	N70-42033 *	#	US-PATENT-3,356,917	c 33	N79-21265 *	US-PATENT-3,384,895	c 07	N71-22984 *
US-PATENT-3,324,370	c 09	N71-10677 *	#	US-PATENT-3,357,024	c 12	N71-20815 *	US-PATENT-3,385,036	c 15	N71-22721 *
US-PATENT-3,324,388	c 14	N71-10797 *	#	US-PATENT-3,357,093	c 15	N71-21078 *	US-PATENT-3,386,337	c 15	N71-22799 *
US-PATENT-3,324,423	c 07	N71-10676 *	#	US-PATENT-3,357,237	c 33	N71-21586 *	US-PATENT-3,386,685	c 31	N71-22968 *
US-PATENT-3,324,659	c 28	N71-10574 *	#	US-PATENT-3,357,862	c 03	N71-20904 *	US-PATENT-3,386,686	c 31	N71-22969 *
US-PATENT-3,325,229	c 15	N71-10617 *	#	US-PATENT-3,358,264	c 09	N71-20851 *	US-PATENT-3,387,149	c 14	N71-22993 *
US-PATENT-3,325,723	c 10	N71-10578 *	#	US-PATENT-3,359,046	c 15	N71-20739 *	US-PATENT-3,387,218	c 37	N78-17386 *
US-PATENT-3,325,749	c 09	N71-28810 *	#	US-PATENT-3,359,132	c 09	N71-20705 *	US-PATENT-3,388,258	c 14	N71-22996 *
US-PATENT-3,325,749	c 09	N71-28810 *	#	US-PATENT-3,359,409	c 07	N71-21476 *	US-PATENT-3,388,387	c 10	N71-23033 *
US-PATENT-3,326,043	c 14	N71-10500 *	#	US-PATENT-3,359,435	c 15	N71-21311 *	US-PATENT-3,388,590	c 14	N71-23087 *
US-PATENT-3,326,407	c 15	N71-10577 *	#	US-PATENT-3,359,555	c 09	N71-20864 *	US-PATENT-3,389,017	c 15	N71-23022 *
US-PATENT-3,327,298	c 08	N71-21042 *	#	US-PATENT-3,359,555	c 54	N78-17680 *	US-PATENT-3,389,260	c 14	N71-23269 *
US-PATENT-3,327,991	c 15	N71-21234 *	#	US-PATENT-3,359,589	c 15	N71-21744 *	US-PATENT-3,389,346	c 10	N71-28859 *
US-PATENT-3,328,624	c 28	N71-28850 *	#	US-PATENT-3,359,818	c 23	N71-21882 *	US-PATENT-3,389,877	c 15	N71-28936 *
US-PATENT-3,329,375	c 21	N71-21708 *	#	US-PATENT-3,359,855	c 09	N71-20658 *	US-PATENT-3,390,017	c 03	N71-23336 *
US-PATENT-3,329,918	c 09	N71-21583 *	#	US-PATENT-3,360,798	c 23	N71-20658 *	US-PATENT-3,390,020	c 26	N71-23654 *
US-PATENT-3,330,052	c 11	N71-21474 *	#	US-PATENT-3,360,864	c 14	N71-24693 *	US-PATENT-3,390,023	c 26	N75-29236 *
US-PATENT-3,330,082	c 15	N71-21531 *	#	US-PATENT-3,360,972	c 15	N71-24833 *	US-PATENT-3,390,282	c 09	N71-23311 *
US-PATENT-3,330,510	c 31	N71-28851 *	#	US-PATENT-3,360,980	c 14	N71-20741 *	US-PATENT-3,390,378	c 08	N71-23295 *
US-PATENT-3,330,549	c 15	N71-21530 *	#	US-PATENT-3,360,988	c 09	N71-20816 *	US-PATENT-3,390,528	c 20	N79-21124 *
US-PATENT-3,331,071	c 07	N71-28900 *	#	US-PATENT-3,361,045	c 15	N71-21060 *	US-PATENT-3,391,080	c 15	N71-24046 *
US-PATENT-3,331,246	c 11	N71-21475 *	#	US-PATENT-3,361,067	c 26	N71-21824 *	US-PATENT-3,392,403	c 23	N71-23976 *
US-PATENT-3,331,255	c 15	N71-21529 *	#	US-PATENT-3,361,400	c 15	N71-20813 *	US-PATENT-3,392,586	c 14	N71-24232 *
US-PATENT-3,331,404	c 12	N71-21089 *	#	US-PATENT-3,361,666	c 15	N71-21403 *	US-PATENT-3,392,864	c 18	N71-23658 *
US-PATENT-3,331,951	c 21	N71-21688 *	#	US-PATENT-3,361,985	c 10	N71-20852 *	US-PATENT-3,392,865	c 15	N71-23816 *
US-PATENT-3,333,152	c 25	N71-21693 *	#	US-PATENT-3,364,311	c 07	N71-20814 *	US-PATENT-3,392,936	c 01	N71-23497 *
US-PATENT-3,333,788	c 31	N71-21881 *	#	US-PATENT-3,364,366	c 09	N71-28926 *	US-PATENT-3,393,059	c 06	N71-23499 *
US-PATENT-3,334,225	c 14	N73-32325 *	#	US-PATENT-3,364,578	c 14	N71-21079 *	US-PATENT-3,393,330	c 22	N71-23599 *
US-PATENT-3,336,725	c 15	N71-21528 *	#	US-PATENT-3,364,631	c 32	N71-21045 *	US-PATENT-3,393,332	c 09	N71-23443 *
US-PATENT-3,336,748	c 25	N71-21694 *	#	US-PATENT-3,364,777	c 15	N71-20740 *	US-PATENT-3,393,347	c 10	N71-23543 *
US-PATENT-3,336,754	c 28	N71-22983 *	#	US-PATENT-3,364,813	c 09	N71-22999 *	US-PATENT-3,393,380	c 10	N71-23544 *
US-PATENT-3,337,004	c 14	N71-23092 *	#	US-PATENT-3,365,657	c 10	N71-22961 *	US-PATENT-3,393,384	c 09	N71-23573 *
US-PATENT-3,337,279	c 05	N71-23080 *	#	US-PATENT-3,365,665	c 14	N71-23037 *	US-PATENT-3,394,286	c 14	N73-30391 *
US-PATENT-3,337,315	c 18	N71-23088 *	#	US-PATENT-3,365,897	c 33	N71-28892 *	US-PATENT-3,394,359	c 08	N71-28925 *
US-PATENT-3,337,337	c 18	N71-22894 *	#	US-PATENT-3,365,930	c 14	N71-22964 *	US-PATENT-3,394,975	c 23	N71-30027 *
US-PATENT-3,337,790	c 12	N71-20896 *	#	US-PATENT-3,365,941	c 14	N71-22962 *	US-PATENT-3,395,053	c 18	N71-23047 *
US-PATENT-3,337,812	c 09	N71-23097 *	#	US-PATENT-3,366,886	c 10	N71-22965 *	US-PATENT-3,395,565	c 14	N73-30390 *
US-PATENT-3,339,404	c 14	N71-22765 *	#	US-PATENT-3,366,894	c 10	N71-23084 *	US-PATENT-3,395,565	c 14	N73-30390 *
US-PATENT-3,339,863	c 14	N71-23040 *	#	US-PATENT-3,367,114	c 28	N71-23081 *	US-PATENT-3,396,057	c 26	N71-23043 *
US-PATENT-3,340,099	c 03	N71-23006 *	#	US-PATENT-3,367,121	c 15	N71-23025 *	US-PATENT-3,396,184	c 06	N71-28808 *
US-PATENT-3,340,395	c 14	N71-23041 *	#	US-PATENT-3,367,182	c 33	N71-23085 *	US-PATENT-3,396,303	c 09	N71-22987 *
US-PATENT-3,340,397	c 11	N71-23042 *	#	US-PATENT-3,367,224	c 15	N71-22798 *	US-PATENT-3,396,584	c 14	N71-30026 *
US-PATENT-3,340,430	c 09	N71-22796 *	#	US-PATENT-3,367,271	c 15	N71-24042 *	US-PATENT-3,396,719	c 52	N79-21750 *
US-PATENT-3,340,532	c 10	N71-21473 *	#	US-PATENT-3,367,308	c 11	N71-22875 *	US-PATENT-3,396,920	c 31	N71-29050 *
US-PATENT-3,340,599	c 09	N71-23027 *	#	US-PATENT-3,367,445	c 15	N71-23048 *	US-PATENT-3,397,094	c 26	N71-29156 *
US-PATENT-3,340,713	c 15	N71-22723 *	#	US-PATENT-3,368,486	c 15	N71-22874 *	US-PATENT-3,397,117	c 15	N71-23086 *
US-PATENT-3,340,732	c 02	N71-23007 *	#	US-PATENT-3,369,223	c 08	N71-22707 *	US-PATENT-3,397,318	c 14	N71-22991 *
US-PATENT-3,340,732	c 02	N71-23007 *	#	US-PATENT-3,369,223	c 08	N71-22710 *	US-PATENT-3,397,512	c 15	N71-23023 *
US-PATENT-3,341,151	c 31	N71-23009 *	#	US-PATENT-3,369,564	c 15	N71-23051 *	US-PATENT-3,397,537	c 20	N79-21125 *
US-PATENT-3,341,169	c 15	N71-23024 *	#	US-PATENT-3,370,039	c 06	N71-28807 *	US-PATENT-3,397,932	c 15	N71-22982 *
US-PATENT-3,341,708	c 16	N71-22895 *	#	US-PATENT-3,370,039	c 06	N71-28807 *	US-PATENT-3,399,299	c 10	N71-23662 *
US-PATENT-3,341,778	c 07	N71-23098 *	#	US-PATENT-3,372,588	c 33	N71-29051 *	US-PATENT-3,399,574	c 32	N71-24285 *
US-PATENT-3,341,977	c 15	N71-22705 *	#	US-PATENT-3,373,016	c 26	N75-27127 *	US-PATENT-3,		

US-PATENT-3,405,867	c 31	N71-24315 *	US-PATENT-3,426,219	c 09	N69-24317 *	US-PATENT-3,447,015	c 06	N69-39889 *	#
US-PATENT-3,406,336	c 10	N71-24883 *	US-PATENT-3,426,230	c 15	N69-24319 *	US-PATENT-3,447,071	c 25	N69-39884 *	#
US-PATENT-3,406,742	c 33	N71-24276 *	US-PATENT-3,426,263	c 03	N71-19438 *	US-PATENT-3,447,154	c 21	N71-11786 *	#
US-PATENT-3,407,304	c 14	N71-23240 *	US-PATENT-3,426,272	c 14	N69-39785 *	US-PATENT-3,447,155	c 09	N71-18598 *	#
US-PATENT-3,408,816	c 28	N71-24736 *	US-PATENT-3,426,746	c 05	N71-26293 *	US-PATENT-3,447,233	c 15	N69-39786 *	#
US-PATENT-3,408,870	c 14	N71-23227 *	US-PATENT-3,426,791	c 15	N71-19569 *	US-PATENT-3,447,774	c 15	N71-19485 *	#
US-PATENT-3,409,247	c 33	N71-28903 *	US-PATENT-3,427,047	c 15	N69-27490 *	US-PATENT-3,447,850	c 09	N71-18800 *	#
US-PATENT-3,409,252	c 15	N71-23255 *	US-PATENT-3,427,089	c 23	N69-24332 *	US-PATENT-3,448,273	c 10	N69-39736 *	#
US-PATENT-3,409,554	c 26	N71-23292 *	US-PATENT-3,427,083	c 09	N71-19479 *	US-PATENT-3,448,290	c 07	N71-23315 *	#
US-PATENT-3,409,730	c 33	N71-24145 *	US-PATENT-3,427,087	c 11	N69-24321 *	US-PATENT-3,448,341	c 09	N71-12526 *	#
US-PATENT-3,411,356	c 14	N71-23226 *	US-PATENT-3,427,205	c 15	N69-24320 *	US-PATENT-3,448,346	c 15	N71-18701 *	#
US-PATENT-3,411,900	c 26	N75-27126 *	US-PATENT-3,427,435	c 17	N69-25147 *	US-PATENT-3,450,842	c 07	N69-39978 *	#
US-PATENT-3,412,559	c 28	N71-23293 *	US-PATENT-3,427,454	c 05	N71-19440 *	US-PATENT-3,450,878	c 14	N71-20430 *	#
US-PATENT-3,412,588	c 14	N71-23225 *	US-PATENT-3,427,525	c 03	N69-21330 *	US-PATENT-3,450,946	c 09	N69-39897 *	#
US-PATENT-3,412,729	c 04	N71-23185 *	US-PATENT-3,428,761	c 09	N69-24329 *	US-PATENT-3,452,103	c 06	N73-30101 *	#
US-PATENT-3,412,961	c 32	N71-23971 *	US-PATENT-3,428,812	c 14	N69-27485 *	US-PATENT-3,452,423	c 26	N71-16037 *	#
US-PATENT-3,413,115	c 17	N71-23385 *	US-PATENT-3,428,847	c 15	N69-24266 *	US-PATENT-3,452,872	c 14	N69-39896 *	#
US-PATENT-3,413,393	c 17	N71-29137 *	US-PATENT-3,428,910	c 09	N69-24330 *	US-PATENT-3,453,172	c 15	N69-39735 *	#
US-PATENT-3,413,510	c 09	N71-23190 *	US-PATENT-3,428,919	c 07	N69-24334 *	US-PATENT-3,453,462	c 03	N69-39893 *	#
US-PATENT-3,413,536	c 03	N71-24605 *	US-PATENT-3,428,923	c 07	N69-27482 *	US-PATENT-3,453,546	c 05	N71-12342 *	#
US-PATENT-3,414,012	c 09	N71-23191 *	US-PATENT-3,429,058	c 12	N69-39988 *	US-PATENT-3,453,878	c 09	N79-21083 *	#
US-PATENT-3,414,358	c 14	N71-23175 *	US-PATENT-3,429,177	c 06	N69-39733 *	US-PATENT-3,454,410	c 18	N69-39979 *	#
US-PATENT-3,415,032	c 15	N71-23256 *	US-PATENT-3,429,477	c 15	N69-27502 *	US-PATENT-3,454,766	c 35	N75-27329 *	#
US-PATENT-3,415,069	c 15	N71-24044 *	US-PATENT-3,429,756	c 76	N79-21910 *	US-PATENT-3,455,121	c 14	N71-20427 *	#
US-PATENT-3,415,116	c 14	N71-23790 *	US-PATENT-3,430,063	c 09	N69-27500 *	US-PATENT-3,455,171	c 23	N71-16088 *	#
US-PATENT-3,415,126	c 21	N71-23289 *	US-PATENT-3,430,115	c 09	N69-24318 *	US-PATENT-3,456,112	c 14	N69-39937 *	#
US-PATENT-3,415,156	c 15	N71-24043 *	US-PATENT-3,430,131	c 24	N71-20518 *	US-PATENT-3,456,193	c 08	N71-19763 *	#
US-PATENT-3,415,643	c 17	N71-23248 *	US-PATENT-3,430,182	c 14	N69-27431 *	US-PATENT-3,456,201	c 09	N69-39885 *	#
US-PATENT-3,416,106	c 09	N71-24808 *	US-PATENT-3,430,227	c 08	N71-19687 *	US-PATENT-3,458,104	c 15	N71-20393 *	#
US-PATENT-3,416,274	c 31	N71-24035 *	US-PATENT-3,430,237	c 07	N69-39974 *	US-PATENT-3,458,313	c 14	N71-17574 *	#
US-PATENT-3,416,939	c 18	N71-24183 *	US-PATENT-3,430,460	c 15	N69-27505 *	US-PATENT-3,458,651	c 09	N71-19449 *	#
US-PATENT-3,416,975	c 17	N71-23828 *	US-PATENT-3,430,902	c 14	N69-27486 *	US-PATENT-3,458,702	c 14	N71-18699 *	#
US-PATENT-3,416,988	c 15	N71-24164 *	US-PATENT-3,430,909	c 11	N69-27466 *	US-PATENT-3,458,726	c 10	N69-39888 *	#
US-PATENT-3,417,247	c 14	N71-23797 *	US-PATENT-3,430,937	c 15	N69-27483 *	US-PATENT-3,458,833	c 10	N71-19418 *	#
US-PATENT-3,417,266	c 09	N71-23270 *	US-PATENT-3,430,942	c 15	N69-27504 *	US-PATENT-3,458,851	c 09	N69-39734 *	#
US-PATENT-3,417,298	c 10	N71-23271 *	US-PATENT-3,431,149	c 14	N69-27459 *	US-PATENT-3,459,391	c 03	N71-11058 *	#
US-PATENT-3,417,318	c 14	N71-23174 *	US-PATENT-3,431,397	c 15	N69-27871 *	US-PATENT-3,460,378	c 14	N71-24233 *	#
US-PATENT-3,417,321	c 09	N71-23316 *	US-PATENT-3,431,460	c 09	N71-23189 *	US-PATENT-3,460,379	c 15	N71-24834 *	#
US-PATENT-3,417,332	c 07	N71-23405 *	US-PATENT-3,431,559	c 09	N69-24333 *	US-PATENT-3,460,381	c 14	N71-23725 *	#
US-PATENT-3,417,399	c 30	N71-23723 *	US-PATENT-3,432,730	c 09	N69-27422 *	US-PATENT-3,460,397	c 15	N71-24045 *	#
US-PATENT-3,417,400	c 07	N71-28809 *	US-PATENT-3,433,015	c 28	N71-20330 *	US-PATENT-3,460,759	c 28	N71-23968 *	#
US-PATENT-3,419,329	c 14	N71-23268 *	US-PATENT-3,433,079	c 14	N69-27503 *	US-PATENT-3,460,781	c 14	N71-23698 *	#
US-PATENT-3,419,363	c 16	N71-23710 *	US-PATENT-3,433,662	c 14	N71-20461 *	US-PATENT-3,460,995	c 03	N71-20407 *	#
US-PATENT-3,419,384	c 17	N73-28573 *	US-PATENT-3,433,818	c 06	N71-23230 *	US-PATENT-3,461,290	c 14	N71-26475 *	#
US-PATENT-3,419,433	c 03	N71-23187 *	US-PATENT-3,433,908	c 10	N71-23863 *	US-PATENT-3,461,393	c 10	N71-26415 *	#
US-PATENT-3,419,531	c 27	N79-21191 *	US-PATENT-3,433,953	c 14	N69-27484 *	US-PATENT-3,461,437	c 10	N71-26434 *	#
US-PATENT-3,419,537	c 06	N71-23500 *	US-PATENT-3,433,960	c 16	N69-27491 *	US-PATENT-3,461,700	c 15	N71-26346 *	#
US-PATENT-3,419,827	c 09	N71-23548 *	US-PATENT-3,433,961	c 14	N69-27432 *	US-PATENT-3,461,721	c 12	N71-20436 *	#
US-PATENT-3,419,964	c 14	N69-21363 *	US-PATENT-3,434,033	c 09	N69-39984 *	US-PATENT-3,461,855	c 05	N71-20268 *	#
US-PATENT-3,419,992	c 14	N71-23401 *	US-PATENT-3,434,037	c 10	N71-26414 *	US-PATENT-3,463,001	c 14	N71-20429 *	#
US-PATENT-3,420,069	c 15	N69-21465 *	US-PATENT-3,434,050	c 09	N71-20569 *	US-PATENT-3,463,563	c 15	N71-23812 *	#
US-PATENT-3,420,223	c 05	N69-21925 *	US-PATENT-3,434,064	c 09	N69-39986 *	US-PATENT-3,463,673	c 03	N71-20491 *	#
US-PATENT-3,420,225	c 05	N69-21473 *	US-PATENT-3,434,855	c 18	N71-24184 *	US-PATENT-3,463,679	c 17	N71-24142 *	#
US-PATENT-3,420,253	c 12	N69-21466 *	US-PATENT-3,434,885	c 03	N71-20492 *	US-PATENT-3,463,761	c 06	N73-30099 *	#
US-PATENT-3,420,338	c 15	N71-26243 *	US-PATENT-3,435,246	c 14	N69-24391 *	US-PATENT-3,463,762	c 06	N73-30100 *	#
US-PATENT-3,420,471	c 05	N69-21380 *	US-PATENT-3,437,394	c 14	N69-27461 *	US-PATENT-3,463,939	c 10	N71-19471 *	#
US-PATENT-3,420,704	c 15	N69-21460 *	US-PATENT-3,437,527	c 03	N69-24267 *	US-PATENT-3,464,012	c 14	N71-26244 *	#
US-PATENT-3,420,945	c 09	N69-21542 *	US-PATENT-3,437,580	c 04	N69-27487 *	US-PATENT-3,464,016	c 10	N71-19472 *	#
US-PATENT-3,420,978	c 15	N69-21471 *	US-PATENT-3,437,818	c 03	N71-23354 *	US-PATENT-3,464,018	c 09	N71-23525 *	#
US-PATENT-3,421,004	c 14	N71-19568 *	US-PATENT-3,437,832	c 09	N69-27463 *	US-PATENT-3,464,049	c 32	N71-15974 *	#
US-PATENT-3,421,053	c 15	N69-21472 *	US-PATENT-3,437,874	c 08	N71-20571 *	US-PATENT-3,464,051	c 15	N71-17685 *	#
US-PATENT-3,421,056	c 14	N69-23191 *	US-PATENT-3,437,903	c 03	N69-25146 *	US-PATENT-3,465,482	c 31	N71-16080 *	#
US-PATENT-3,421,105	c 09	N69-21543 *	US-PATENT-3,437,919	c 14	N69-27423 *	US-PATENT-3,465,567	c 15	N71-18579 *	#
US-PATENT-3,421,134	c 09	N69-21470 *	US-PATENT-3,437,935	c 09	N69-24324 *	US-PATENT-3,465,569	c 14	N71-17659 *	#
US-PATENT-3,421,331	c 15	N69-23190 *	US-PATENT-3,437,959	c 07	N69-24323 *	US-PATENT-3,465,584	c 14	N71-23726 *	#
US-PATENT-3,421,363	c 11	N69-21540 *	US-PATENT-3,438,044	c 07	N69-27460 *	US-PATENT-3,465,638	c 11	N71-18578 *	#
US-PATENT-3,421,506	c 05	N69-23192 *	US-PATENT-3,438,263	c 14	N71-20435 *	US-PATENT-3,465,986	c 31	N71-20396 *	#
US-PATENT-3,421,541	c 15	N69-21924 *	US-PATENT-3,439,886	c 31	N69-27499 *	US-PATENT-3,466,052	c 15	N71-19570 *	#
US-PATENT-3,421,549	c 03	N69-21469 *	US-PATENT-3,440,419	c 14	N73-28491 *	US-PATENT-3,466,085	c 05	N71-12343 *	#
US-PATENT-3,421,591	c 14	N69-21923 *	US-PATENT-3,442,674	c 25	N82-29370 *	US-PATENT-3,466,198	c 03	N71-19545 *	#
US-PATENT-3,421,700	c 15	N69-23185 *	US-PATENT-3,443,128	c 03	N69-39890 *	US-PATENT-3,466,243	c 15	N71-23810 *	#
US-PATENT-3,421,768	c 15	N69-21362 *	US-PATENT-3,443,208	c 14	N71-20428 *	US-PATENT-3,466,418	c 15	N71-18613 *	#
US-PATENT-3,421,864	c 17	N71-23046 *	US-PATENT-3,443,384	c 28	N71-24321 *	US-PATENT-3,466,424	c 15	N71-20395 *	#
US-PATENT-3,421,948	c 03	N69-21337 *	US-PATENT-3,443,390	c 11	N71-24964 *	US-PATENT-3,466,459	c 09	N71-26000 *	#
US-PATENT-3,422,213	c 03	N69-21539 *	US-PATENT-3,443,412	c 15	N71-23811 *	US-PATENT-3,466,484	c 14	N71-18482 *	#
US-PATENT-3,422,278	c 09	N69-21468 *	US-PATENT-3,443,472	c 06	N69-39936 *	US-PATENT-3,466,560	c 09	N71-19466 *	#
US-PATENT-3,422,291	c 25	N69-21929 *	US-PATENT-3,443,473	c 15	N71-23254 *	US-PATENT-3,466,570	c 10	N71-25950 *	#
US-PATENT-3,422,324	c 14	N69-21541 *	US-PATENT-3,443,583	c 14	N71-18625 *	US-PATENT-3,467,837	c 05	N71-23317 *	#
US-PATENT-3,422,352	c 14	N71-19431 *	US-PATENT-3,443,584	c 32	N71-16106 *	US-PATENT-3,468,303	c 09	N71-26002 *	#
US-PATENT-3,422,354	c 09	N69-21926 *	US-PATENT-3,443,732	c 15	N71-15607 *	US-PATENT-3,468,548	c 15	N71-26294 *	#
US-PATENT-3,422,390	c 09	N69-21927 *	US-PATENT-3,443,773	c 31	N71-23912 *	US-PATENT-3,468,609	c 16	N71-24170 *	#
US-PATENT-3,422,403	c 08	N69-21928 *	US-PATENT-3,443,779	c 01	N69-39981 *	US-PATENT-3,468,727	c 14	N71-25892 *	#
US-PATENT-3,422,440	c 09	N69-21467 *	US-PATENT-3,444,051	c 05	N71-11207 *	US-PATENT-3,468,785	c 17	N71-25903 *	#
US-PATENT-3,423,179	c 15	N69-21922 *	US-PATENT-3,444,127	c 06	N71-11237 *	US-PATENT-3,469,068	c 15	N71-23815 *	#
US-PATENT-3,423,290	c 06	N71-17705 *	US-PATENT-3,444,375	c 14	N71-15599 *	US-PATENT-3,469,069	c 15	N71-23798 *	#
US-PATENT-3,423,579	c 09	N71-19480 *	US-PATENT-3,444,380	c 07	N69-39980 *	US-PATENT-3,469,087	c 16	N71-25914 *	#
US-PATENT-3,423,608	c 09	N69-21313 *	US-PATENT-3,446,075	c 14	N73-30394 *	US-PATENT-3,469,143	c 33	N75-29318 *	#
US-PATENT-3,423,627	c 33	N78-17293 *	US-PATENT-3,446,387	c 15	N69-39935 *	US-PATENT-3,469,289	c 15	N71-25975 *	#
US-PATENT-3,424,966	c 10	N71-20448 *	US-PATENT-3,446,558	c 16	N71-24074 *	US-PATENT-3,469,375	c 14	N71-18483 *	#
US-PATENT-3,425,131	c 15	N71-19489 *	US-PATENT-3,446,642	c 18	N69-39895 *	US-PATENT-3,469,436	c 15	N71-23817 *	#
US-PATENT-3,425,268	c 14	N69-39975 *	US-PATENT-3,446,773	c 03	N71-11050 *	US-PATENT-3,469,437	c 14	N71-24234 *	#
US-PATENT-3,425,272	c 14	N71-20439 *	US-PATENT-3,446,960	c 14	N69-39982 *	US-PATENT-3,469,734	c 11	N71-17800 *	#
US-PATENT-3,425,276	c 14	N69-24257 *	US-PATENT-3,446,992	c 09	N69-39987 *	US-PATENT-3,470,043	c 15	N71-24047 *	#
US-PATENT-3,425,486	c 05	N71-24147 *	US-PATENT-3,446,997	c 03	N69-39988 *	US-PATENT-3,470,3			

US-PATENT-3,470,342	c 09	N71-19610 *	US-PATENT-3,493,415	c 15	N71-15610 *	US-PATENT-3,517,171	c 08	N71-24633 *
US-PATENT-3,470,443	c 03	N71-23239 *	US-PATENT-3,493,437	c 03	N71-11056 *	US-PATENT-3,517,221	c 10	N71-19547 *
US-PATENT-3,470,446	c 09	N71-23188 *	US-PATENT-3,493,522	c 06	N71-11243 *	US-PATENT-3,517,268	c 10	N71-19469 *
US-PATENT-3,470,466	c 14	N71-23699 *	US-PATENT-3,493,524	c 06	N71-11242 *	US-PATENT-3,517,302	c 25	N71-16073 *
US-PATENT-3,470,475	c 10	N71-19467 *	US-PATENT-3,493,665	c 14	N71-15621 *	US-PATENT-3,517,318	c 08	N71-19432 *
US-PATENT-3,470,489	c 09	N71-23598 *	US-PATENT-3,493,677	c 07	N71-11300 *	US-PATENT-3,517,328	c 16	N71-18614 *
US-PATENT-3,470,485	c 10	N71-23669 *	US-PATENT-3,493,711	c 15	N71-14932 *	US-PATENT-3,518,232	c 06	N71-11235 *
US-PATENT-3,470,496	c 09	N71-19470 *	US-PATENT-3,493,746	c 15	N71-15606 *	US-PATENT-3,519,483	c 44	N82-24644 *
US-PATENT-3,471,856	c 30	N71-16090 *	US-PATENT-3,493,797	c 15	N71-17652 *	US-PATENT-3,519,484	c 44	N82-24643 *
US-PATENT-3,471,858	c 07	N71-12391 *	US-PATENT-3,493,805	c 09	N71-12521 *	US-PATENT-3,520,190	c 10	N71-13537 *
US-PATENT-3,472,019	c 10	N71-26326 *	US-PATENT-3,493,901	c 09	N71-12517 *	US-PATENT-3,520,238	c 14	N71-18465 *
US-PATENT-3,472,059	c 14	N71-23755 *	US-PATENT-3,493,929	c 08	N71-12505 *	US-PATENT-3,520,317	c 12	N71-17578 *
US-PATENT-3,472,060	c 14	N71-26136 *	US-PATENT-3,493,942	c 08	N71-12504 *	US-PATENT-3,520,496	c 31	N71-16345 *
US-PATENT-3,472,069	c 15	N71-20441 *	US-PATENT-3,495,260	c 21	N71-13958 *	US-PATENT-3,520,503	c 31	N71-16085 *
US-PATENT-3,472,080	c 10	N71-26339 *	US-PATENT-3,495,262	c 07	N71-12396 *	US-PATENT-3,520,617	c 23	N71-16101 *
US-PATENT-3,472,086	c 15	N71-23809 *	US-PATENT-3,498,840	c 44	N82-24642 *	US-PATENT-3,520,660	c 23	N71-16355 *
US-PATENT-3,472,140	c 14	N71-26474 *	US-PATENT-3,498,841	c 44	N82-24641 *	US-PATENT-3,521,054	c 06	N71-13461 *
US-PATENT-3,472,202	c 17	N71-24911 *	US-PATENT-3,500,020	c 01	N71-13411 *	US-PATENT-3,521,143	c 08	N71-18752 *
US-PATENT-3,472,372	c 15	N71-20440 *	US-PATENT-3,500,525	c 15	N71-17688 *	US-PATENT-3,521,290	c 31	N71-16102 *
US-PATENT-3,472,470	c 02	N71-20570 *	US-PATENT-3,500,677	c 14	N71-17584 *	US-PATENT-3,523,228	c 10	N71-24861 *
US-PATENT-3,472,577	c 23	N71-24857 *	US-PATENT-3,500,686	c 12	N71-17589 *	US-PATENT-3,526,030	c 15	N71-17686 *
US-PATENT-3,472,625	c 06	N71-23527 *	US-PATENT-3,500,688	c 14	N71-17587 *	US-PATENT-3,526,134	c 33	N71-16356 *
US-PATENT-3,472,629	c 14	N71-20442 *	US-PATENT-3,500,747	c 09	N71-18599 *	US-PATENT-3,526,139	c 31	N71-16221 *
US-PATENT-3,472,698	c 03	N71-23449 *	US-PATENT-3,500,827	c 05	N71-11203 *	US-PATENT-3,526,140	c 27	N71-16223 *
US-PATENT-3,472,709	c 18	N71-26153 *	US-PATENT-3,501,112	c 15	N71-17693 *	US-PATENT-3,526,359	c 33	N71-16357 *
US-PATENT-3,472,742	c 17	N71-24830 *	US-PATENT-3,501,632	c 27	N71-16348 *	US-PATENT-3,526,365	c 28	N71-16224 *
US-PATENT-3,472,998	c 16	N71-20400 *	US-PATENT-3,501,641	c 20	N71-16340 *	US-PATENT-3,526,372	c 31	N71-16346 *
US-PATENT-3,473,050	c 09	N71-20447 *	US-PATENT-3,501,648	c 10	N71-24799 *	US-PATENT-3,526,382	c 15	N71-17649 *
US-PATENT-3,473,116	c 25	N71-20563 *	US-PATENT-3,501,649	c 10	N71-18723 *	US-PATENT-3,526,460	c 23	N71-16365 *
US-PATENT-3,473,165	c 05	N71-26333 *	US-PATENT-3,501,664	c 14	N71-17585 *	US-PATENT-3,526,473	c 18	N71-15545 *
US-PATENT-3,473,216	c 15	N71-20443 *	US-PATENT-3,501,683	c 15	N71-17684 *	US-PATENT-3,526,580	c 18	N71-16210 *
US-PATENT-3,473,379	c 12	N71-26387 *	US-PATENT-3,501,684	c 09	N71-26092 *	US-PATENT-3,526,611	c 06	N71-11236 *
US-PATENT-3,473,758	c 03	N71-20273 *	US-PATENT-3,501,701	c 08	N71-18692 *	US-PATENT-3,526,845	c 09	N71-13531 *
US-PATENT-3,474,192	c 07	N71-26102 *	US-PATENT-3,501,704	c 07	N71-11282 *	US-PATENT-3,526,897	c 09	N71-13521 *
US-PATENT-3,474,220	c 15	N71-19486 *	US-PATENT-3,501,712	c 09	N71-19516 *	US-PATENT-3,527,724	c 27	N78-33228 *
US-PATENT-3,474,328	c 14	N71-26266 *	US-PATENT-3,501,743	c 09	N71-18843 *	US-PATENT-3,529,480	c 15	N71-17692 *
US-PATENT-3,474,357	c 09	N71-20445 *	US-PATENT-3,501,750	c 08	N71-19288 *	US-PATENT-3,529,928	c 17	N71-16393 *
US-PATENT-3,474,413	c 10	N71-26103 *	US-PATENT-3,501,752	c 08	N71-18595 *	US-PATENT-3,530,336	c 09	N71-13518 *
US-PATENT-3,474,441	c 08	N71-19544 *	US-PATENT-3,501,764	c 10	N71-18722 *	US-PATENT-3,531,964	c 15	N71-18616 *
US-PATENT-3,475,384	c 06	N73-30103 *	US-PATENT-3,502,051	c 15	N71-17647 *	US-PATENT-3,531,978	c 14	N71-18481 *
US-PATENT-3,475,442	c 26	N75-27125 *	US-PATENT-3,502,074	c 05	N71-11190 *	US-PATENT-3,531,982	c 15	N71-18132 *
US-PATENT-3,475,675	c 33	N78-17295 *	US-PATENT-3,502,141	c 33	N71-16277 *	US-PATENT-3,531,989	c 33	N71-15641 *
US-PATENT-3,478,514	c 37	N77-22479 *	US-PATENT-3,503,251	c 32	N71-16428 *	US-PATENT-3,532,118	c 12	N71-18615 *
US-PATENT-3,480,789	c 10	N71-26626 *	US-PATENT-3,504,258	c 10	N71-18724 *	US-PATENT-3,532,128	c 15	N71-18580 *
US-PATENT-3,481,638	c 15	N71-26312 *	US-PATENT-3,504,983	c 23	N71-16341 *	US-PATENT-3,532,427	c 21	N71-19212 *
US-PATENT-3,481,802	c 31	N79-21226 *	US-PATENT-3,506,496	c 44	N82-24645 *	US-PATENT-3,532,428	c 30	N71-15990 *
US-PATENT-3,481,887	c 18	N71-26155 *	US-PATENT-3,507,034	c 15	N71-17650 *	US-PATENT-3,532,538	c 18	N71-16046 *
US-PATENT-3,482,179	c 10	N71-26331 *	US-PATENT-3,507,114	c 27	N71-16392 *	US-PATENT-3,532,551	c 03	N71-11049 *
US-PATENT-3,483,535	c 10	N71-26418 *	US-PATENT-3,507,146	c 05	N71-11202 *	US-PATENT-3,532,568	c 17	N71-16044 *
US-PATENT-3,484,712	c 10	N71-26374 *	US-PATENT-3,507,150	c 20	N71-16281 *	US-PATENT-3,532,673	c 06	N71-11238 *
US-PATENT-3,485,290	c 20	N79-21123 *	US-PATENT-3,507,425	c 15	N71-17628 *	US-PATENT-3,532,807	c 07	N71-19433 *
US-PATENT-3,486,123	c 16	N71-24831 *	US-PATENT-3,507,436	c 08	N71-19420 *	US-PATENT-3,532,819	c 10	N71-19468 *
US-PATENT-3,487,216	c 14	N71-24809 *	US-PATENT-3,507,704	c 03	N71-11052 *	US-PATENT-3,532,866	c 08	N71-18602 *
US-PATENT-3,487,281	c 15	N71-24695 *	US-PATENT-3,507,706	c 03	N71-18698 *	US-PATENT-3,532,880	c 24	N71-16095 *
US-PATENT-3,487,288	c 10	N71-25139 *	US-PATENT-3,508,036	c 08	N71-18693 *	US-PATENT-3,532,894	c 23	N71-16100 *
US-PATENT-3,487,680	c 15	N71-17696 *	US-PATENT-3,508,039	c 08	N71-19437 *	US-PATENT-3,532,948	c 10	N71-18772 *
US-PATENT-3,487,765	c 54	N78-17679 *	US-PATENT-3,508,053	c 09	N71-18830 *	US-PATENT-3,532,960	c 03	N71-12255 *
US-PATENT-3,488,103	c 14	N71-15604 *	US-PATENT-3,508,070	c 03	N71-11057 *	US-PATENT-3,532,973	c 15	N71-17822 *
US-PATENT-3,488,123	c 14	N71-17627 *	US-PATENT-3,508,152	c 07	N71-11266 *	US-PATENT-3,532,975	c 10	N71-19421 *
US-PATENT-3,488,414	c 15	N71-17803 *	US-PATENT-3,508,156	c 07	N71-11267 *	US-PATENT-3,532,979	c 10	N71-12554 *
US-PATENT-3,488,461	c 09	N71-12518 *	US-PATENT-3,508,347	c 05	N71-24606 *	US-PATENT-3,532,985	c 07	N71-19773 *
US-PATENT-3,488,504	c 21	N71-15642 *	US-PATENT-3,508,402	c 33	N71-16104 *	US-PATENT-3,533,001	c 07	N71-24583 *
US-PATENT-3,488,771	c 54	N78-17678 *	US-PATENT-3,508,541	c 05	N71-11193 *	US-PATENT-3,533,006	c 10	N72-28241 *
US-PATENT-3,490,074	c 54	N78-17677 *	US-PATENT-3,508,578	c 32	N71-16103 *	US-PATENT-3,533,074	c 08	N71-12502 *
US-PATENT-3,490,130	c 05	N71-12345 *	US-PATENT-3,508,723	c 31	N71-16222 *	US-PATENT-3,533,093	c 10	N71-19417 *
US-PATENT-3,490,205	c 14	N71-17588 *	US-PATENT-3,508,724	c 02	N71-11037 *	US-PATENT-3,533,098	c 08	N71-18594 *
US-PATENT-3,490,235	c 28	N71-14044 *	US-PATENT-3,508,739	c 15	N71-17648 *	US-PATENT-3,534,365	c 07	N71-19854 *
US-PATENT-3,490,238	c 15	N70-22192 *	US-PATENT-3,508,779	c 15	N71-24897 *	US-PATENT-3,534,367	c 02	N71-19287 *
US-PATENT-3,490,405	c 15	N71-15597 *	US-PATENT-3,508,940	c 18	N71-16124 *	US-PATENT-3,534,375	c 07	N71-11285 *
US-PATENT-3,490,440	c 05	N71-12346 *	US-PATENT-3,508,955	c 18	N71-16105 *	US-PATENT-3,534,376	c 07	N71-26101 *
US-PATENT-3,490,718	c 33	N71-14035 *	US-PATENT-3,508,999	c 15	N71-17687 *	US-PATENT-3,534,406	c 05	N71-11195 *
US-PATENT-3,490,719	c 21	N71-14159 *	US-PATENT-3,509,034	c 14	N71-17575 *	US-PATENT-3,534,407	c 05	N71-11194 *
US-PATENT-3,490,721	c 02	N71-11039 *	US-PATENT-3,509,386	c 03	N71-11055 *	US-PATENT-3,534,479	c 14	N71-17657 *
US-PATENT-3,490,939	c 33	N71-14032 *	US-PATENT-3,509,419	c 24	N71-16213 *	US-PATENT-3,534,480	c 14	N71-17658 *
US-PATENT-3,490,965	c 09	N71-12513 *	US-PATENT-3,509,469	c 23	N71-16099 *	US-PATENT-3,534,485	c 11	N71-18773 *
US-PATENT-3,491,202	c 07	N71-12392 *	US-PATENT-3,509,475	c 09	N71-24596 *	US-PATENT-3,534,555	c 12	N71-17631 *
US-PATENT-3,491,255	c 09	N71-12514 *	US-PATENT-3,509,491	c 09	N71-18721 *	US-PATENT-3,534,584	c 10	N71-13545 *
US-PATENT-3,491,335	c 14	N71-15620 *	US-PATENT-3,509,551	c 08	N71-18694 *	US-PATENT-3,534,585	c 14	N71-17701 *
US-PATENT-3,491,857	c 14	N71-17626 *	US-PATENT-3,509,558	c 08	N71-19435 *	US-PATENT-3,534,592	c 14	N71-17656 *
US-PATENT-3,492,176	c 27	N71-14090 *	US-PATENT-3,509,570	c 09	N71-18720 *	US-PATENT-3,534,596	c 14	N71-17586 *
US-PATENT-3,492,672	c 05	N71-12344 *	US-PATENT-3,509,578	c 07	N71-19493 *	US-PATENT-3,534,597	c 31	N71-15643 *
US-PATENT-3,492,739	c 15	N71-15571 *	US-PATENT-3,511,680	c 31	N79-21227 *	US-PATENT-3,534,650	c 15	N71-17653 *
US-PATENT-3,492,858	c 35	N78-17358 *	US-PATENT-3,512,009	c 08	N71-18751 *	US-PATENT-3,534,686	c 31	N71-15687 *
US-PATENT-3,492,862	c 14	N71-15600 *	US-PATENT-3,514,785	c 54	N78-18761 *	US-PATENT-3,534,727	c 05	N71-11189 *
US-PATENT-3,492,947	c 28	N71-14058 *	US-PATENT-3,516,091	c 05	N71-24623 *	US-PATENT-3,534,765	c 12	N71-17661 *
US-PATENT-3,493,003	c 15	N71-15609 *	US-PATENT-3,516,179	c 11	N71-19494 *	US-PATENT-3,534,826	c 31	N71-15689 *
US-PATENT-3,493,004	c 12	N71-17579 *	US-PATENT-3,516,185	c 12	N71-18603 *	US-PATENT-3,534,836	c 15	N71-17805 *
US-PATENT-3,493,012	c 15	N71-15608 *	US-PATENT-3,516,284	c 12	N71-17573 *	US-PATENT-3,534,909	c 15	N71-17654 *
US-PATENT-3,493,027	c 31	N71-18611 *	US-PATENT-3,516,404	c 05	N71-17599 *	US-PATENT-3,534,924	c 31	N71-15674 *
US-PATENT-3,493,153	c 05	N71-12351 *	US-PATENT-3,516,711	c 05	N71-12341 *	US-PATENT-3,534,925	c 31	N71-15676 *
US-PATENT-3,493,155	c 26	N71-14354 *	US-PATENT-3,516,879	c 23	N71-16212 *	US-PATENT-3,534,926	c 15	N71-19214 *
US-PATENT-3,493,194	c 21	N71-14132 *	US-PATENT-3,516,964	c 06	N71-11240 *	US-PATENT-3,534,930	c 02	N71-13422 *
US-PATENT-3,493,197	c 02	N71-11043 *	US-PATENT-3,516,970	c 06	N71-11239 *	US-PATENT-3,535,012	c 16	N71-15567 *
US-PATENT-3,493,291	c 14	N71-15622 *	US-PATENT-3,517,109	c 06	N71-24740 *	US-PATENT-3,535,013	c 16	N71-15551 *
US-PATENT-3,493,294	c 14	N71-15605 *	US-PATENT-3,517,162	c 07	N71-19436 *	US-PATENT-3,535,014	c 16	N71-15565 *
US-PATENT-3,493,401	c 18	N71-14014 *		c 33	N71-16278 *	US-PATENT-3,535,024	c 14	N71-17662 *



US-PATENT-3,535,041	c 14	N71-17655 *	US-PATENT-3,550,023	c 09	N71-24806 *	US-PATENT-3,570,785	c 28	N71-27585 *
US-PATENT-3,535,110	c 17	N71-15468 *	US-PATENT-3,550,034	c 16	N71-24832 *	US-PATENT-3,570,789	c 02	N71-27088 *
US-PATENT-3,535,130	c 18	N71-15469 *	US-PATENT-3,550,129	c 21	N71-24948 *	US-PATENT-3,571,555	c 15	N71-27135 *
US-PATENT-3,535,165	c 33	N71-15568 *	US-PATENT-3,550,585	c 05	N71-24736 *	US-PATENT-3,571,656	c 09	N71-27001 *
US-PATENT-3,535,179	c 15	N71-17651 *	US-PATENT-3,551,266	c 33	N71-24858 *	US-PATENT-3,571,662	c 10	N71-27366 *
US-PATENT-3,535,352	c 18	N71-15688 *	US-PATENT-3,551,816	c 07	N71-24613 *	US-PATENT-3,571,693	c 09	N71-27364 *
US-PATENT-3,535,446	c 09	N71-12539 *	US-PATENT-3,551,831	c 33	N75-27251 *	US-PATENT-3,571,889	c 09	N71-27058 *
US-PATENT-3,535,451	c 07	N71-11281 *	US-PATENT-3,552,124	c 28	N71-26642 *	US-PATENT-3,571,700	c 14	N71-27325 *
US-PATENT-3,535,487	c 08	N71-24890 *	US-PATENT-3,552,125	c 28	N71-26173 *	US-PATENT-3,571,707	c 10	N71-27338 *
US-PATENT-3,535,543	c 09	N71-13486 *	US-PATENT-3,553,002	c 18	N71-26100 *	US-PATENT-3,571,800	c 10	N71-27272 *
US-PATENT-3,535,547	c 09	N71-12520 *	US-PATENT-3,553,586	c 07	N71-26292 *	US-PATENT-3,571,801	c 08	N71-27255 *
US-PATENT-3,535,554	c 09	N71-12518 *	US-PATENT-3,553,704	c 10	N71-26142 *	US-PATENT-3,572,089	c 14	N71-27185 *
US-PATENT-3,535,560	c 08	N71-12494 *	US-PATENT-3,553,904	c 15	N71-26134 *	US-PATENT-3,572,104	c 28	N71-27094 *
US-PATENT-3,535,562	c 33	N71-27862 *	US-PATENT-3,554,466	c 31	N71-26537 *	US-PATENT-3,572,112	c 15	N71-27006 *
US-PATENT-3,535,570	c 15	N71-24696 *	US-PATENT-3,554,647	c 23	N71-26206 *	US-PATENT-3,572,610	c 28	N71-27095 *
US-PATENT-3,535,586	c 25	N71-15562 *	US-PATENT-3,554,806	c 03	N71-26084 *	US-PATENT-3,572,835	c 14	N71-27215 *
US-PATENT-3,535,602	c 09	N71-13522 *	US-PATENT-3,555,192	c 07	N71-26181 *	US-PATENT-3,573,078	c 27	N82-29451 *
US-PATENT-3,535,642	c 08	N71-12503 *	US-PATENT-3,555,361	c 10	N71-26531 *	US-PATENT-3,573,470	c 74	N78-33913 *
US-PATENT-3,535,644	c 09	N71-12519 *	US-PATENT-3,555,455	c 23	N71-26722 *	US-PATENT-3,573,504	c 33	N78-17294 *
US-PATENT-3,535,657	c 07	N71-12390 *	US-PATENT-3,555,483	c 35	N77-21393 *	US-PATENT-3,573,583	c 09	N71-28886 *
US-PATENT-3,535,658	c 08	N71-12500 *	US-PATENT-3,555,867	c 15	N71-26148 *	US-PATENT-3,573,797	c 08	N71-27057 *
US-PATENT-3,535,683	c 31	N71-15566 *	US-PATENT-3,555,898	c 12	N71-26546 *	US-PATENT-3,573,977	c 15	N71-28582 *
US-PATENT-3,535,696	c 08	N71-12506 *	US-PATENT-3,556,048	c 09	N71-26701 *	US-PATENT-3,573,986	c 03	N71-28579 *
US-PATENT-3,535,702	c 09	N71-12515 *	US-PATENT-3,556,834	c 07	N71-26291 *	US-PATENT-3,573,996	c 18	N71-29040 *
US-PATENT-3,536,103	c 15	N71-19213 *	US-PATENT-3,557,027	c 06	N71-25929 *	US-PATENT-3,574,057	c 22	N71-28759 *
US-PATENT-3,537,096	c 08	N71-12507 *	US-PATENT-3,557,534	c 15	N71-26185 *	US-PATENT-3,574,084	c 14	N71-28933 *
US-PATENT-3,537,103	c 08	N71-24650 *	US-PATENT-3,559,031	c 10	N71-26085 *	US-PATENT-3,574,277	c 15	N71-28467 *
US-PATENT-3,537,107	c 05	N71-24730 *	US-PATENT-3,559,096	c 10	N71-25882 *	US-PATENT-3,574,286	c 11	N71-27036 *
US-PATENT-3,537,305	c 26	N71-25490 *	US-PATENT-3,559,460	c 14	N71-26672 *	US-PATENT-3,574,438	c 07	N71-29065 *
US-PATENT-3,537,515	c 09	N71-24807 *	US-PATENT-3,559,937	c 14	N71-26627 *	US-PATENT-3,574,448	c 23	N71-29123 *
US-PATENT-3,537,668	c 05	N71-24728 *	US-PATENT-3,560,081	c 19	N71-26674 *	US-PATENT-3,574,462	c 14	N71-29041 *
US-PATENT-3,537,672	c 15	N71-24694 *	US-PATENT-3,560,161	c 06	N71-26754 *	US-PATENT-3,574,467	c 23	N71-29125 *
US-PATENT-3,538,053	c 27	N78-17214 *	US-PATENT-3,561,828	c 15	N71-26189 *	US-PATENT-3,574,470	c 14	N71-28993 *
US-PATENT-3,539,905	c 09	N71-24800 *	US-PATENT-3,562,575	c 09	N71-26182 *	US-PATENT-3,574,770	c 06	N71-27254 *
US-PATENT-3,540,045	c 09	N71-24595 *	US-PATENT-3,562,631	c 14	N71-26137 *	US-PATENT-3,575,336	c 15	N71-27214 *
US-PATENT-3,540,048	c 31	N71-24813 *	US-PATENT-3,562,857	c 15	N71-26721 *	US-PATENT-3,575,585	c 14	N71-27058 *
US-PATENT-3,540,050	c 09	N71-24804 *	US-PATENT-3,562,881	c 09	N71-26678 *	US-PATENT-3,575,597	c 14	N71-27090 *
US-PATENT-3,540,054	c 07	N71-24625 *	US-PATENT-3,562,919	c 15	N71-26145 *	US-PATENT-3,575,602	c 16	N71-27183 *
US-PATENT-3,540,056	c 07	N71-24614 *	US-PATENT-3,563,135	c 15	N71-27147 *	US-PATENT-3,575,638	c 09	N71-26133 *
US-PATENT-3,540,250	c 15	N71-24865 *	US-PATENT-3,563,198	c 18	N71-26285 *	US-PATENT-3,575,641	c 10	N71-26334 *
US-PATENT-3,540,449	c 15	N71-24835 *	US-PATENT-3,563,232	c 05	N71-27234 *	US-PATENT-3,576,107	c 28	N71-26781 *
US-PATENT-3,540,615	c 33	N71-25351 *	US-PATENT-3,563,307	c 15	N71-26611 *	US-PATENT-3,576,127	c 14	N71-26161 *
US-PATENT-3,540,676	c 15	N71-24600 *	US-PATENT-3,563,668	c 14	N71-26788 *	US-PATENT-3,576,135	c 15	N71-26635 *
US-PATENT-3,540,790	c 16	N71-26154 *	US-PATENT-3,563,727	c 15	N71-27184 *	US-PATENT-3,576,301	c 02	N71-26110 *
US-PATENT-3,540,802	c 23	N71-24868 *	US-PATENT-3,563,918	c 06	N71-27363 *	US-PATENT-3,576,656	c 18	N71-26772 *
US-PATENT-3,540,942	c 15	N71-24875 *	US-PATENT-3,564,234	c 09	N71-26787 *	US-PATENT-3,576,669	c 15	N71-29032 *
US-PATENT-3,540,989	c 24	N71-25555 *	US-PATENT-3,564,401	c 14	N71-26135 *	US-PATENT-3,576,723	c 09	N71-28691 *
US-PATENT-3,541,250	c 07	N71-24742 *	US-PATENT-3,564,420	c 14	N71-26774 *	US-PATENT-3,576,786	c 06	N71-28620 *
US-PATENT-3,541,312	c 08	N71-24891 *	US-PATENT-3,564,584	c 15	N71-26162 *	US-PATENT-3,577,014	c 10	N71-28860 *
US-PATENT-3,541,314	c 07	N71-24741 *	US-PATENT-3,564,886	c 23	N71-26654 *	US-PATENT-3,577,092	c 07	N71-28430 *
US-PATENT-3,541,346	c 09	N71-24803 *	US-PATENT-3,564,906	c 32	N71-26681 *	US-PATENT-3,577,356	c 06	N73-30102 *
US-PATENT-3,541,361	c 09	N71-24904 *	US-PATENT-3,565,530	c 15	N71-26673 *	US-PATENT-3,578,755	c 14	N71-29134 *
US-PATENT-3,541,422	c 03	N71-24719 *	US-PATENT-3,565,584	c 15	N71-27372 *	US-PATENT-3,578,756	c 11	N71-28629 *
US-PATENT-3,541,428	c 09	N71-24893 *	US-PATENT-3,565,607	c 17	N71-26773 *	US-PATENT-3,578,758	c 14	N71-28992 *
US-PATENT-3,541,439	c 09	N71-24843 *	US-PATENT-3,565,719	c 03	N71-26726 *	US-PATENT-3,578,838	c 16	N71-29131 *
US-PATENT-3,541,450	c 07	N71-24840 *	US-PATENT-3,566,027	c 07	N71-27341 *	US-PATENT-3,578,867	c 14	N71-28994 *
US-PATENT-3,541,459	c 10	N71-24844 *	US-PATENT-3,566,045	c 08	N71-27210 *	US-PATENT-3,578,957	c 08	N71-29033 *
US-PATENT-3,541,479	c 09	N71-24841 *	US-PATENT-3,566,122	c 14	N71-27323 *	US-PATENT-3,578,988	c 09	N71-29139 *
US-PATENT-3,541,486	c 16	N71-28554 *	US-PATENT-3,566,143	c 14	N71-27407 *	US-PATENT-3,578,992	c 09	N71-28421 *
US-PATENT-3,541,679	c 03	N71-24681 *	US-PATENT-3,566,158	c 10	N71-27126 *	US-PATENT-3,579,041	c 09	N71-29008 *
US-PATENT-3,541,825	c 15	N71-24836 *	US-PATENT-3,566,268	c 10	N71-26577 *	US-PATENT-3,579,103	c 14	N71-28891 *
US-PATENT-3,541,875	c 15	N71-24984 *	US-PATENT-3,566,396	c 10	N71-26544 *	US-PATENT-3,579,122	c 08	N71-29034 *
US-PATENT-3,543,050	c 10	N71-24862 *	US-PATENT-3,566,459	c 14	N71-27334 *	US-PATENT-3,579,146	c 08	N71-29138 *
US-PATENT-3,543,159	c 09	N71-24717 *	US-PATENT-3,566,676	c 14	N71-26199 *	US-PATENT-3,579,147	c 07	N71-28429 *
US-PATENT-3,543,839	c 34	N78-17337 *	US-PATENT-3,566,993	c 15	N71-27169 *	US-PATENT-3,579,168	c 09	N71-29035 *
US-PATENT-3,545,208	c 28	N71-25213 *	US-PATENT-3,567,155	c 21	N71-27324 *	US-PATENT-3,579,242	c 07	N71-28980 *
US-PATENT-3,545,226	c 23	N71-24725 *	US-PATENT-3,567,339	c 15	N71-27084 *	US-PATENT-3,579,390	c 18	N71-28729 *
US-PATENT-3,545,252	c 11	N71-24985 *	US-PATENT-3,567,651	c 18	N71-27170 *	US-PATENT-3,579,412	c 17	N71-28747 *
US-PATENT-3,545,262	c 38	N76-28563 *	US-PATENT-3,567,677	c 18	N71-25881 *	US-PATENT-3,581,492	c 28	N71-28915 *
US-PATENT-3,545,275	c 09	N71-24597 *	US-PATENT-3,567,861	c 10	N71-25865 *	US-PATENT-3,582,828	c 33	N77-21314 *
US-PATENT-3,545,725	c 15	N71-24599 *	US-PATENT-3,567,913	c 10	N71-27137 *	US-PATENT-3,582,960	c 09	N71-28618 *
US-PATENT-3,545,792	c 15	N71-24903 *	US-PATENT-3,567,927	c 14	N71-28863 *	US-PATENT-3,583,058	c 15	N71-29018 *
US-PATENT-3,546,386	c 07	N71-24621 *	US-PATENT-3,568,010	c 09	N71-27232 *	US-PATENT-3,583,239	c 15	N71-29132 *
US-PATENT-3,546,471	c 14	N71-24864 *	US-PATENT-3,568,028	c 10	N71-27136 *	US-PATENT-3,583,322	c 05	N71-28619 *
US-PATENT-3,546,552	c 15	N71-24895 *	US-PATENT-3,568,103	c 10	N71-25900 *	US-PATENT-3,583,419	c 12	N71-28741 *
US-PATENT-3,546,553	c 09	N71-24805 *	US-PATENT-3,568,197	c 07	N71-27056 *	US-PATENT-3,583,744	c 15	N71-29133 *
US-PATENT-3,546,684	c 07	N71-24624 *	US-PATENT-3,568,447	c 15	N71-27432 *	US-PATENT-3,583,777	c 15	N71-28465 *
US-PATENT-3,546,694	c 10	N71-24798 *	US-PATENT-3,568,572	c 15	N71-27754 *	US-PATENT-3,583,815	c 15	N71-28740 *
US-PATENT-3,546,705	c 09	N71-24842 *	US-PATENT-3,568,702	c 10	N71-25899 *	US-PATENT-3,584,311	c 09	N71-28468 *
US-PATENT-3,546,917	c 15	N71-24679 *	US-PATENT-3,568,748	c 15	N71-27091 *	US-PATENT-3,584,660	c 15	N72-12408 *
US-PATENT-3,546,920	c 06	N71-24607 *	US-PATENT-3,568,795	c 15	N71-27067 *	US-PATENT-3,585,514	c 10	N71-33129 *
US-PATENT-3,546,931	c 32	N71-25360 *	US-PATENT-3,568,805	c 15	N71-27146 *	US-PATENT-3,585,882	c 15	N71-33518 *
US-PATENT-3,547,105	c 09	N71-24618 *	US-PATENT-3,568,874	c 15	N71-27068 *	US-PATENT-3,586,261	c 31	N71-33160 *
US-PATENT-3,547,376	c 31	N71-25434 *	US-PATENT-3,568,885	c 14	N71-27005 *	US-PATENT-3,587,306	c 11	N71-33612 *
US-PATENT-3,547,540	c 16	N71-24828 *	US-PATENT-3,569,710	c 14	N71-25901 *	US-PATENT-3,587,424	c 16	N71-33410 *
US-PATENT-3,547,801	c 03	N71-24718 *	US-PATENT-3,569,744	c 09	N71-27016 *	US-PATENT-3,588,220	c 23	N71-33229 *
US-PATENT-3,548,107	c 07	N71-24622 *	US-PATENT-3,569,804	c 09	N71-25999 *	US-PATENT-3,588,331	c 07	N72-12081 *
US-PATENT-3,548,633	c 18	N71-24934 *	US-PATENT-3,569,827	c 18	N71-27397 *	US-PATENT-3,588,359	c 07	N71-33108 *
US-PATENT-3,548,636	c 15	N71-24910 *	US-PATENT-3,569,828	c 14	N71-27186 *	US-PATENT-3,588,483	c 08	N71-33110 *
US-PATENT-3,548,812	c 05	N71-24729 *	US-PATENT-3,569,866	c 10	N71-27271 *	US-PATENT-3,588,648	c 07	N71-33613 *
US-PATENT-3,548,930	c 33	N71-25353 *	US-PATENT-3,569,875	c 07	N71-27191 *	US-PATENT-3,588,671	c 09	N71-33109 *
US-PATENT-3,549,435	c 14	N72-28438 *	US-PATENT-3,569,956	c 10	N71-25917 *	US-PATENT-3,588,705	c 07	N71-33666 *
US-PATENT-3,549,564	c 06	N71-24739 *	US-PATENT-3,569,976	c 07	N71-27233 *	US-PATENT-3,588,751	c 07	N71-33606 *
US-PATENT-3,549,799	c 09	N71-25866 *	US-PATENT-3,570,143	c 10	N71-27365 *	US-PATENT-3,588,874	c 09	N71-33519 *
US-PATENT-3,549,882	c 15	N71-24896 *	US-PATENT-3,570,364	c 28	N71-26779 *	US-PATENT-3,588,883	c 10	N71-33407 *
US-PATENT-3,549,955	c 09	N71-24892 *	US-PATENT-3,570,513	c 12	N71-27332 *	US-PATENT-3,591,420	c 03	N71-33409 *



US-PATENT-3,591,426	c 17	N71-33408 *	US-PATENT-3,613,454	c 35	N77-27368 *	US-PATENT-3,636,564	c 05	N72-22092 *
US-PATENT-3,591,885	c 15	N72-11390 *	US-PATENT-3,613,457	c 15	N72-22482 *	US-PATENT-3,636,623	c 15	N72-20444 *
US-PATENT-3,591,960	c 15	N72-12409 *	US-PATENT-3,613,794	c 12	N72-21310 *	US-PATENT-3,636,711	c 28	N72-20758 *
US-PATENT-3,591,967	c 28	N72-11709 *	US-PATENT-3,614,228	c 14	N72-21409 *	US-PATENT-3,636,966	c 05	N72-20097 *
US-PATENT-3,592,422	c 15	N72-11391 *	US-PATENT-3,614,327	c 08	N72-22162 *	US-PATENT-3,637,051	c 15	N72-20443 *
US-PATENT-3,592,478	c 09	N72-11224 *	US-PATENT-3,614,343	c 07	N72-21119 *	US-PATENT-3,637,170	c 21	N72-21624 *
US-PATENT-3,592,505	c 05	N72-11085 *	US-PATENT-3,614,431	c 14	N72-21408 *	US-PATENT-3,637,312	c 14	N72-20379 *
US-PATENT-3,592,545	c 14	N72-11364 *	US-PATENT-3,614,475	c 10	N72-16172 *	US-PATENT-3,637,842	c 06	N72-20121 *
US-PATENT-3,592,559	c 02	N72-11018 *	US-PATENT-3,614,557	c 26	N72-21701 *	US-PATENT-3,638,002	c 08	N72-21197 *
US-PATENT-3,592,628	c 15	N72-11387 *	US-PATENT-3,614,587	c 09	N72-22196 *	US-PATENT-3,638,066	c 10	N72-20225 *
US-PATENT-3,592,768	c 15	N72-11389 *	US-PATENT-3,614,648	c 09	N72-21247 *	US-PATENT-3,638,103	c 09	N72-21243 *
US-PATENT-3,593,001	c 15	N72-11392 *	US-PATENT-3,614,772	c 08	N72-22163 *	US-PATENT-3,638,114	c 10	N72-20222 *
US-PATENT-3,593,024	c 24	N72-11595 *	US-PATENT-3,614,898	c 15	N72-21462 *	US-PATENT-3,638,224	c 09	N72-21244 *
US-PATENT-3,593,132	c 09	N72-11225 *	US-PATENT-3,614,899	c 09	N72-22195 *	US-PATENT-3,639,250	c 14	N72-22443 *
US-PATENT-3,593,138	c 07	N72-11149 *	US-PATENT-3,615,021	c 15	N72-22483 *	US-PATENT-3,639,510	c 06	N72-22107 *
US-PATENT-3,593,175	c 10	N72-11256 *	US-PATENT-3,615,245	c 15	N72-21465 *	US-PATENT-3,639,809	c 15	N72-22486 *
US-PATENT-3,593,180	c 07	N72-11150 *	US-PATENT-3,615,465	c 06	N72-21094 *	US-PATENT-3,639,835	c 14	N72-22442 *
US-PATENT-3,593,194	c 16	N72-12440 *	US-PATENT-3,615,853	c 03	N72-22042 *	US-PATENT-3,640,256	c 28	N72-22772 *
US-PATENT-3,594,790	c 07	N72-12080 *	US-PATENT-3,616,338	c 15	N72-21466 *	US-PATENT-3,641,470	c 35	N78-17359 *
US-PATENT-3,594,803	c 09	N72-12136 *	US-PATENT-3,616,528	c 03	N72-22041 *	US-PATENT-3,647,276	c 14	N72-22444 *
US-PATENT-3,596,465	c 28	N72-11708 *	US-PATENT-3,617,804	c 25	N72-24753 *	US-PATENT-3,647,529	c 27	N74-23125 *
US-PATENT-3,596,510	c 14	N72-11363 *	US-PATENT-3,619,896	c 15	N72-22487 *	US-PATENT-3,647,924	c 11	N72-23215 *
US-PATENT-3,596,554	c 15	N72-11385 *	US-PATENT-3,619,924	c 11	N72-22247 *	US-PATENT-3,648,043	c 09	N72-23173 *
US-PATENT-3,596,863	c 15	N72-11386 *	US-PATENT-3,620,018	c 28	N72-22771 *	US-PATENT-3,648,083	c 12	N72-25292 *
US-PATENT-3,597,281	c 03	N72-11062 *	US-PATENT-3,620,069	c 14	N72-22440 *	US-PATENT-3,648,152	c 03	N72-23048 *
US-PATENT-3,598,921	c 08	N72-11171 *	US-PATENT-3,620,076	c 11	N72-22246 *	US-PATENT-3,648,209	c 09	N72-27226 *
US-PATENT-3,599,216	c 07	N72-11148 *	US-PATENT-3,620,083	c 14	N72-22438 *	US-PATENT-3,648,250	c 09	N72-25248 *
US-PATENT-3,599,335	c 08	N72-11172 *	US-PATENT-3,620,095	c 15	N72-21463 *	US-PATENT-3,648,256	c 08	N72-25207 *
US-PATENT-3,599,443	c 05	N72-11084 *	US-PATENT-3,620,585	c 15	N72-22490 *	US-PATENT-3,648,275	c 08	N72-25206 *
US-PATENT-3,599,489	c 14	N72-11365 *	US-PATENT-3,620,595	c 14	N72-22445 *	US-PATENT-3,648,461	c 28	N72-23810 *
US-PATENT-3,600,046	c 15	N72-11388 *	US-PATENT-3,620,606	c 23	N72-22673 *	US-PATENT-3,648,516	c 35	N74-22095 *
US-PATENT-3,600,599	c 33	N78-17296 *	US-PATENT-3,620,718	c 17	N72-22535 *	US-PATENT-3,649,242	c 15	N72-25448 *
US-PATENT-3,602,920	c 11	N72-17183 *	US-PATENT-3,620,784	c 18	N72-23581 *	US-PATENT-3,649,353	c 26	N72-28762 *
US-PATENT-3,602,923	c 05	N72-22093 *	US-PATENT-3,620,791	c 18	N72-22566 *	US-PATENT-3,649,356	c 15	N72-25447 *
US-PATENT-3,602,979	c 15	N72-22492 *	US-PATENT-3,620,846	c 31	N72-22874 *	US-PATENT-3,649,462	c 11	N72-25284 *
US-PATENT-3,602,984	c 26	N72-17820 *	US-PATENT-3,621,130	c 08	N72-22164 *	US-PATENT-3,649,907	c 09	N72-23172 *
US-PATENT-3,603,092	c 28	N72-17843 *	US-PATENT-3,621,193	c 15	N72-23497 *	US-PATENT-3,649,921	c 05	N72-23085 *
US-PATENT-3,603,093	c 28	N72-18766 *	US-PATENT-3,621,194	c 15	N72-22491 *	US-PATENT-3,649,935	c 07	N72-25170 *
US-PATENT-3,603,260	c 33	N72-17947 *	US-PATENT-3,621,228	c 08	N72-22165 *	US-PATENT-3,650,095	c 14	N72-23457 *
US-PATENT-3,603,285	c 25	N75-29192 *	US-PATENT-3,621,277	c 10	N72-22236 *	US-PATENT-3,650,474	c 28	N72-23809 *
US-PATENT-3,603,382	c 33	N72-17948 *	US-PATENT-3,621,285	c 09	N72-22200 *	US-PATENT-3,651,008	c 27	N81-24258 *
US-PATENT-3,603,433	c 15	N72-17450 *	US-PATENT-3,621,287	c 09	N72-22201 *	US-PATENT-3,653,052	c 09	N72-25247 *
US-PATENT-3,603,532	c 30	N72-17873 *	US-PATENT-3,621,290	c 09	N72-22202 *	US-PATENT-3,653,882	c 18	N72-25539 *
US-PATENT-3,603,683	c 14	N72-17326 *	US-PATENT-3,621,294	c 09	N72-23171 *	US-PATENT-3,653,970	c 03	N72-24037 *
US-PATENT-3,603,686	c 16	N72-13437 *	US-PATENT-3,621,330	c 33	N77-21316 *	US-PATENT-3,654,036	c 03	N72-25019 *
US-PATENT-3,603,693	c 14	N72-17323 *	US-PATENT-3,621,362	c 09	N72-22203 *	US-PATENT-3,655,814	c 27	N81-15104 *
US-PATENT-3,603,722	c 07	N72-17109 *	US-PATENT-3,621,372	c 09	N72-25249 *	US-PATENT-3,656,313	c 23	N72-25619 *
US-PATENT-3,603,772	c 08	N72-22166 *	US-PATENT-3,621,406	c 09	N72-33204 *	US-PATENT-3,656,317	c 33	N72-25911 *
US-PATENT-3,603,798	c 09	N72-17152 *	US-PATENT-3,621,407	c 09	N72-21245 *	US-PATENT-3,656,352	c 14	N72-25411 *
US-PATENT-3,603,864	c 09	N72-17154 *	US-PATENT-3,621,565	c 09	N72-22199 *	US-PATENT-3,656,781	c 15	N72-25450 *
US-PATENT-3,603,892	c 09	N72-17155 *	US-PATENT-3,623,030	c 08	N72-21198 *	US-PATENT-3,657,190	c 23	N82-29358 *
US-PATENT-3,603,946	c 09	N72-17153 *	US-PATENT-3,623,094	c 10	N72-22235 *	US-PATENT-3,657,549	c 14	N72-25409 *
US-PATENT-3,603,974	c 14	N72-18411 *	US-PATENT-3,623,107	c 07	N72-21117 *	US-PATENT-3,657,644	c 14	N72-24477 *
US-PATENT-3,603,976	c 08	N72-18184 *	US-PATENT-3,623,114	c 07	N72-22127 *	US-PATENT-3,657,928	c 14	N72-25410 *
US-PATENT-3,605,032	c 10	N72-17172 *	US-PATENT-3,623,359	c 35	N77-27367 *	US-PATENT-3,658,295	c 15	N72-25451 *
US-PATENT-3,605,424	c 15	N72-17453 *	US-PATENT-3,623,360	c 14	N72-21405 *	US-PATENT-3,658,569	c 15	N72-25452 *
US-PATENT-3,605,482	c 14	N72-16282 *	US-PATENT-3,623,361	c 14	N72-21407 *	US-PATENT-3,658,608	c 27	N72-25699 *
US-PATENT-3,605,495	c 14	N72-17327 *	US-PATENT-3,623,394	c 15	N72-22488 *	US-PATENT-3,658,974	c 15	N72-25452 *
US-PATENT-3,605,519	c 14	N72-17324 *	US-PATENT-3,623,828	c 15	N72-22489 *	US-PATENT-3,659,043	c 14	N72-25412 *
US-PATENT-3,606,212	c 31	N72-18859 *	US-PATENT-3,623,861	c 17	N72-22530 *	US-PATENT-3,659,053	c 08	N72-25208 *
US-PATENT-3,606,470	c 46	N74-23068 *	US-PATENT-3,624,496	c 15	N72-21464 *	US-PATENT-3,659,148	c 09	N72-25250 *
US-PATENT-3,606,522	c 23	N72-23695 *	US-PATENT-3,624,598	c 21	N72-22619 *	US-PATENT-3,659,184	c 09	N72-25251 *
US-PATENT-3,606,979	c 15	N72-17454 *	US-PATENT-3,624,650	c 07	N72-21118 *	US-PATENT-3,659,225	c 16	N72-25485 *
US-PATENT-3,607,015	c 06	N72-17093 *	US-PATENT-3,624,659	c 09	N72-21246 *	US-PATENT-3,659,292	c 08	N72-25209 *
US-PATENT-3,607,076	c 06	N72-17094 *	US-PATENT-3,624,839	c 05	N72-20098 *	US-PATENT-3,660,240	c 06	N72-25149 *
US-PATENT-3,607,080	c 06	N72-17095 *	US-PATENT-3,625,018	c 15	N72-22484 *	US-PATENT-3,660,434	c 06	N72-25148 *
US-PATENT-3,607,338	c 18	N72-17532 *	US-PATENT-3,625,084	c 15	N72-22485 *	US-PATENT-3,660,704	c 15	N72-25456 *
US-PATENT-3,607,401	c 03	N72-15986 *	US-PATENT-3,625,766	c 03	N72-20032 *	US-PATENT-3,660,851	c 05	N72-25119 *
US-PATENT-3,607,495	c 15	N72-16330 *	US-PATENT-3,626,114	c 35	N79-16246 *	US-PATENT-3,662,337	c 08	N72-25210 *
US-PATENT-3,608,046	c 15	N72-16329 *	US-PATENT-3,626,189	c 14	N72-20381 *	US-PATENT-3,662,441	c 05	N72-25121 *
US-PATENT-3,608,365	c 15	N72-17452 *	US-PATENT-3,626,218	c 14	N72-22439 *	US-PATENT-3,662,547	c 15	N72-25455 *
US-PATENT-3,608,409	c 14	N72-16283 *	US-PATENT-3,626,298	c 07	N72-20140 *	US-PATENT-3,662,604	c 13	N72-25323 *
US-PATENT-3,608,844	c 15	N72-18477 *	US-PATENT-3,626,308	c 10	N72-20223 *	US-PATENT-3,662,661	c 31	N72-25842 *
US-PATENT-3,609,230	c 09	N72-17156 *	US-PATENT-3,626,828	c 14	N72-20380 *	US-PATENT-3,662,744	c 05	N72-25122 *
US-PATENT-3,609,271	c 09	N72-22204 *	US-PATENT-3,628,113	c 37	N77-27400 *	US-PATENT-3,662,973	c 21	N72-25595 *
US-PATENT-3,609,327	c 08	N72-22167 *	US-PATENT-3,629,068	c 22	N72-20597 *	US-PATENT-3,663,346	c 18	N72-25541 *
US-PATENT-3,609,353	c 14	N72-17328 *	US-PATENT-3,629,161	c 18	N72-22567 *	US-PATENT-3,663,347	c 18	N72-25540 *
US-PATENT-3,609,364	c 10	N72-17173 *	US-PATENT-3,630,276	c 33	N72-20915 *	US-PATENT-3,663,464	c 06	N72-25147 *
US-PATENT-3,609,387	c 09	N72-17157 *	US-PATENT-3,630,304	c 11	N72-20244 *	US-PATENT-3,663,521	c 06	N72-25152 *
US-PATENT-3,609,535	c 14	N72-17325 *	US-PATENT-3,630,627	c 03	N72-20033 *	US-PATENT-3,663,753	c 14	N72-25414 *
US-PATENT-3,609,567	c 10	N72-17171 *	US-PATENT-3,631,339	c 08	N72-20177 *	US-PATENT-3,663,828	c 09	N72-25262 *
US-PATENT-3,609,740	c 05	N72-16015 *	US-PATENT-3,631,351	c 10	N72-20224 *	US-PATENT-3,663,839	c 09	N72-25260 *
US-PATENT-3,610,365	c 15	N72-17451 *	US-PATENT-3,631,382	c 09	N72-20200 *	US-PATENT-3,663,843	c 09	N72-25255 *
US-PATENT-3,611,274	c 15	N72-17455 *	US-PATENT-3,631,737	c 15	N72-28495 *	US-PATENT-3,663,885	c 09	N72-25257 *
US-PATENT-3,611,330	c 23	N72-17747 *	US-PATENT-3,632,081	c 15	N72-20442 *	US-PATENT-3,663,886	c 09	N72-25258 *
US-PATENT-3,611,798	c 14	N72-22437 *	US-PATENT-3,632,140	c 15	N72-20445 *	US-PATENT-3,663,929	c 09	N72-25256 *
US-PATENT-3,611,801	c 14	N72-17329 *	US-PATENT-3,632,242	c 15	N72-20446 *	US-PATENT-3,663,938	c 03	N72-25020 *
US-PATENT-3,612,030	c 46	N74-23069 *	US-PATENT-3,632,923	c 09	N72-20199 *	US-PATENT-3,663,940	c 09	N72-25252 *
US-PATENT-3,612,391	c 11	N72-22245 *	US-PATENT-3,632,996	c 08	N72-20176 *	US-PATENT-3,663,941	c 09	N72-25253 *
US-PATENT-3,612,442	c 28	N72-22769 *	US-PATENT-3,633,048	c 10	N72-20221 *	US-PATENT-3,663,944	c 09	N72-25254 *
US-PATENT-3,612,645	c 14	N72-22441 *	US-PATENT-3,633,110	c 07	N72-20141 *	US-PATENT-3,664,185	c 15	N72-26371 *
US-PATENT-3,612,743	c 09	N72-22198 *	US-PATENT-3,634,383	c 27	N73-22710 *	US-PATENT-3,664,874	c 09	N72-25259 *
US-PATENT-3,612,895	c 09	N72-22197 *	US-PATENT-3,635,216	c 05	N72-20096 *	US-PATENT-3,665,064	c 05	N72-25120 *
US-PATENT-3,613,110	c 08	N72-21199 *	US-PATENT-3,635,537	c 33	N80-14330 *	US-PATENT-3,665,307	c 15	N72-25457 *
US-PATENT-3,613,111	c 08	N72-21200 *	US-PATENT-3,635,765	c 03	N72-20034 *	US-PATENT-3,665,313	c 07	N72-25173 *
US-PATENT-3,613,370	c 28	N72-22770 *	US-PATENT-3,636,539	c 03	N72-20031 *	US-PATENT-3,665,417	c 07	N72-25172 *

US-PATENT-3,665,467	c 14	N72-28437 *	US-PATENT-3,700,334	c 14	N73-12446 *	US-PATENT-3,732,040	c 15	N73-24513 *
US-PATENT-3,665,481	c 07	N72-25174 *	US-PATENT-3,700,503	c 14	N73-12447 *	US-PATENT-3,732,158	c 17	N73-24569 *
US-PATENT-3,665,589	c 09	N72-25261 *	US-PATENT-3,700,538	c 18	N73-12604 *	US-PATENT-3,732,397	c 33	N74-14935 *
US-PATENT-3,665,689	c 15	N72-25454 *	US-PATENT-3,700,575	c 15	N73-12487 *	US-PATENT-3,732,405	c 10	N73-25240 *
US-PATENT-3,665,670	c 11	N72-25287 *	US-PATENT-3,700,603	c 14	N73-14428 *	US-PATENT-3,732,409	c 08	N73-26175 *
US-PATENT-3,665,750	c 33	N72-25913 *	US-PATENT-3,700,812	c 10	N73-12244 *	US-PATENT-3,732,567	c 14	N73-25461 *
US-PATENT-3,665,751	c 32	N72-25877 *	US-PATENT-3,700,868	c 09	N73-13209 *	US-PATENT-3,733,350	c 08	N73-26100 *
US-PATENT-3,665,758	c 11	N72-25288 *	US-PATENT-3,700,869	c 08	N73-12175 *	US-PATENT-3,733,424	c 32	N73-26910 *
US-PATENT-3,666,051	c 15	N72-25453 *	US-PATENT-3,700,893	c 14	N73-12444 *	US-PATENT-3,733,483	c 14	N73-26430 *
US-PATENT-3,666,120	c 03	N72-25021 *	US-PATENT-3,700,897	c 14	N73-12445 *	US-PATENT-3,734,432	c 02	N73-28004 *
US-PATENT-3,666,566	c 03	N72-26031 *	US-PATENT-3,700,961	c 23	N73-13660 *	US-PATENT-3,735,206	c 10	N73-25243 *
US-PATENT-3,666,831	c 14	N72-25413 *	US-PATENT-3,701,631	c 17	N73-12547 *	US-PATENT-3,735,591	c 25	N73-25760 *
US-PATENT-3,666,718	c 06	N72-25151 *	US-PATENT-3,701,894	c 07	N73-13149 *	US-PATENT-3,736,453	c 33	N77-22386 *
US-PATENT-3,666,741	c 06	N72-25150 *	US-PATENT-3,702,483	c 08	N73-13187 *	US-PATENT-3,736,607	c 02	N73-26006 *
US-PATENT-3,666,942	c 06	N72-25146 *	US-PATENT-3,702,489	c 32	N73-13921 *	US-PATENT-3,736,764	c 05	N73-26071 *
US-PATENT-3,667,010	c 26	N72-25679 *	US-PATENT-3,702,520	c 15	N73-13467 *	US-PATENT-3,736,849	c 14	N73-26431 *
US-PATENT-3,667,039	c 26	N72-25680 *	US-PATENT-3,702,532	c 28	N73-13773 *	US-PATENT-3,736,938	c 05	N73-27062 *
US-PATENT-3,667,044	c 07	N72-25171 *	US-PATENT-3,702,536	c 15	N73-13466 *	US-PATENT-3,736,956	c 15	N73-26472 *
US-PATENT-3,668,956	c 15	N72-27485 *	US-PATENT-3,702,575	c 31	N73-14854 *	US-PATENT-3,737,117	c 31	N73-26876 *
US-PATENT-3,669,110	c 05	N72-27103 *	US-PATENT-3,702,688	c 23	N73-13661 *	US-PATENT-3,737,118	c 15	N73-25513 *
US-PATENT-3,669,393	c 15	N72-27484 *	US-PATENT-3,702,735	c 06	N73-13129 *	US-PATENT-3,737,121	c 02	N73-26005 *
US-PATENT-3,670,097	c 23	N72-27728 *	US-PATENT-3,702,762	c 06	N73-13128 *	US-PATENT-3,737,181	c 33	N73-26958 *
US-PATENT-3,670,168	c 14	N72-27409 *	US-PATENT-3,702,781	c 15	N73-13465 *	US-PATENT-3,737,217	c 05	N73-26072 *
US-PATENT-3,670,202	c 14	N72-27411 *	US-PATENT-3,702,841	c 18	N73-13562 *	US-PATENT-3,737,231	c 07	N73-26119 *
US-PATENT-3,670,241	c 14	N72-27408 *	US-PATENT-3,702,898	c 10	N73-13235 *	US-PATENT-3,737,237	c 26	N73-26751 *
US-PATENT-3,670,290	c 09	N72-28225 *	US-PATENT-3,702,833	c 23	N73-13662 *	US-PATENT-3,737,639	c 10	N73-26230 *
US-PATENT-3,670,559	c 33	N72-27959 *	US-PATENT-3,702,951	c 09	N73-13208 *	US-PATENT-3,737,676	c 10	N73-26229 *
US-PATENT-3,670,563	c 14	N72-27412 *	US-PATENT-3,702,972	c 16	N73-13489 *	US-PATENT-3,737,757	c 10	N73-26228 *
US-PATENT-3,670,564	c 11	N72-27262 *	US-PATENT-3,702,979	c 14	N73-13420 *	US-PATENT-3,737,762	c 14	N73-26486 *
US-PATENT-3,670,890	c 05	N72-27102 *	US-PATENT-3,704,284	c 74	N81-19898 *	US-PATENT-3,737,776	c 07	N73-26118 *
US-PATENT-3,671,105	c 26	N72-27784 *	US-PATENT-3,704,659	c 14	N73-14427 *	US-PATENT-3,737,781	c 10	N73-25241 *
US-PATENT-3,671,329	c 14	N72-27410 *	US-PATENT-3,705,255	c 15	N73-14469 *	US-PATENT-3,737,815	c 09	N73-26195 *
US-PATENT-3,671,497	c 06	N72-27144 *	US-PATENT-3,705,288	c 15	N73-14468 *	US-PATENT-3,737,824	c 26	N73-26752 *
US-PATENT-3,671,798	c 10	N72-27246 *	US-PATENT-3,705,316	c 09	N73-14214 *	US-PATENT-3,737,905	c 14	N73-26432 *
US-PATENT-3,672,999	c 03	N72-27053 *	US-PATENT-3,705,406	c 07	N73-14130 *	US-PATENT-3,737,912	c 07	N73-26117 *
US-PATENT-3,673,424	c 09	N72-27227 *	US-PATENT-3,706,221	c 14	N73-14429 *	US-PATENT-3,739,646	c 04	N76-26175 *
US-PATENT-3,673,440	c 09	N72-27228 *	US-PATENT-3,706,230	c 31	N73-14855 *	US-PATENT-3,740,671	c 10	N73-27171 *
US-PATENT-3,675,332	c 14	N72-28436 *	US-PATENT-3,706,281	c 31	N73-14853 *	US-PATENT-3,740,725	c 08	N73-26176 *
US-PATENT-3,675,376	c 15	N72-28496 *	US-PATENT-3,706,583	c 18	N73-14584 *	US-PATENT-3,741,001	c 14	N73-27376 *
US-PATENT-3,675,712	c 03	N72-28025 *	US-PATENT-3,706,970	c 21	N73-14692 *	US-PATENT-3,742,316	c 09	N73-27150 *
US-PATENT-3,675,910	c 17	N72-28535 *	US-PATENT-3,708,359	c 27	N73-16764 *	US-PATENT-3,744,128	c 09	N73-28083 *
US-PATENT-3,675,935	c 15	N72-29488 *	US-PATENT-3,708,419	c 33	N73-16918 *	US-PATENT-3,744,148	c 14	N73-28489 *
US-PATENT-3,676,084	c 17	N72-28536 *	US-PATENT-3,708,671	c 14	N73-16483 *	US-PATENT-3,744,247	c 28	N73-27699 *
US-PATENT-3,676,674	c 14	N72-29464 *	US-PATENT-3,708,674	c 14	N73-16484 *	US-PATENT-3,744,294	c 14	N73-27379 *
US-PATENT-3,676,754	c 26	N72-28761 *	US-PATENT-3,709,663	c 06	N73-16106 *	US-PATENT-3,744,305	c 12	N73-28144 *
US-PATENT-3,676,772	c 10	N72-28240 *	US-PATENT-3,710,122	c 16	N73-16536 *	US-PATENT-3,744,320	c 14	N73-28487 *
US-PATENT-3,676,787	c 16	N72-28521 *	US-PATENT-3,710,257	c 07	N73-16121 *	US-PATENT-3,744,480	c 05	N73-27941 *
US-PATENT-3,676,809	c 09	N72-29172 *	US-PATENT-3,710,261	c 10	N73-16205 *	US-PATENT-3,744,510	c 15	N73-27406 *
US-PATENT-3,678,191	c 10	N73-31273 *	US-PATENT-3,710,329	c 10	N73-16206 *	US-PATENT-3,744,738	c 14	N73-27378 *
US-PATENT-3,678,654	c 06	N72-31140 *	US-PATENT-3,711,042	c 02	N73-19004 *	US-PATENT-3,744,739	c 15	N77-10112 *
US-PATENT-3,678,685	c 21	N73-31637 *	US-PATENT-3,711,701	c 74	N77-21941 *	US-PATENT-3,744,794	c 14	N73-27377 *
US-PATENT-3,678,771	c 37	N74-23070 *	US-PATENT-3,712,120	c 14	N73-19421 *	US-PATENT-3,744,912	c 16	N73-30476 *
US-PATENT-3,679,360	c 04	N72-33072 *	US-PATENT-3,712,121	c 14	N73-19420 *	US-PATENT-3,744,913	c 14	N73-28490 *
US-PATENT-3,679,899	c 06	N72-31141 *	US-PATENT-3,712,125	c 14	N73-20478 *	US-PATENT-3,744,922	c 17	N73-27446 *
US-PATENT-3,680,142	c 09	N72-31235 *	US-PATENT-3,712,132	c 14	N73-19419 *	US-PATENT-3,745,082	c 18	N73-30532 *
US-PATENT-3,680,144	c 07	N72-32169 *	US-PATENT-3,712,185	c 15	N73-19458 *	US-PATENT-3,745,089	c 06	N73-27086 *
US-PATENT-3,680,830	c 15	N72-31483 *	US-PATENT-3,712,591	c 09	N73-19234 *	US-PATENT-3,745,090	c 04	N73-27052 *
US-PATENT-3,681,581	c 08	N72-31226 *	US-PATENT-3,713,163	c 28	N73-19793 *	US-PATENT-3,745,149	c 06	N73-27980 *
US-PATENT-3,686,542	c 14	N72-31446 *	US-PATENT-3,713,290	c 05	N73-20137 *	US-PATENT-3,745,255	c 07	N73-28012 *
US-PATENT-3,690,291	c 15	N72-32487 *	US-PATENT-3,713,480	c 15	N73-20514 *	US-PATENT-3,745,300	c 15	N73-28515 *
US-PATENT-3,692,533	c 05	N72-33096 *	US-PATENT-3,713,987	c 15	N73-19457 *	US-PATENT-3,745,352	c 08	N73-30135 *
US-PATENT-3,693,002	c 25	N72-32688 *	US-PATENT-3,714,332	c 10	N73-20253 *	US-PATENT-3,745,357	c 14	N73-28488 *
US-PATENT-3,693,105	c 10	N72-33230 *	US-PATENT-3,714,405	c 14	N73-20475 *	US-PATENT-3,745,410	c 09	N73-30181 *
US-PATENT-3,693,346	c 15	N72-33477 *	US-PATENT-3,714,432	c 09	N73-19235 *	US-PATENT-3,745,475	c 14	N73-30386 *
US-PATENT-3,693,418	c 14	N72-33377 *	US-PATENT-3,714,526	c 09	N73-20231 *	US-PATENT-3,745,739	c 15	N73-27405 *
US-PATENT-3,694,041	c 15	N72-33476 *	US-PATENT-3,714,588	c 14	N73-20274 *	US-PATENT-3,745,816	c 33	N73-27796 *
US-PATENT-3,694,094	c 14	N72-32452 *	US-PATENT-3,714,624	c 08	N73-20217 *	US-PATENT-3,746,998	c 07	N73-30113 *
US-PATENT-3,694,313	c 24	N72-33681 *	US-PATENT-3,714,821	c 14	N73-20476 *	US-PATENT-3,747,111	c 07	N73-28013 *
US-PATENT-3,694,581	c 08	N72-33172 *	US-PATENT-3,714,833	c 11	N73-20267 *	US-PATENT-3,748,722	c 15	N73-33383 *
US-PATENT-3,694,655	c 25	N72-33696 *	US-PATENT-3,715,092	c 03	N73-20039 *	US-PATENT-3,748,853	c 23	N73-30665 *
US-PATENT-3,694,700	c 09	N72-33205 *	US-PATENT-3,715,152	c 23	N73-20741 *	US-PATENT-3,748,905	c 14	N73-30395 *
US-PATENT-3,694,753	c 07	N72-33146 *	US-PATENT-3,715,590	c 14	N73-20477 *	US-PATENT-3,749,123	c 15	N73-30459 *
US-PATENT-3,694,771	c 09	N73-15235 *	US-PATENT-3,715,660	c 03	N73-20040 *	US-PATENT-3,749,156	c 31	N73-30829 *
US-PATENT-3,695,101	c 11	N72-12264 *	US-PATENT-3,715,663	c 07	N73-20175 *	US-PATENT-3,749,205	c 15	N73-30460 *
US-PATENT-3,696,418	c 09	N73-12211 *	US-PATENT-3,715,693	c 07	N73-20174 *	US-PATENT-3,749,332	c 31	N73-32750 *
US-PATENT-3,696,833	c 11	N73-12265 *	US-PATENT-3,715,723	c 09	N73-20232 *	US-PATENT-3,749,362	c 15	N73-30457 *
US-PATENT-3,697,021	c 15	N73-12486 *	US-PATENT-3,715,915	c 07	N73-20176 *	US-PATENT-3,749,831	c 07	N73-30115 *
US-PATENT-3,697,030	c 35	N77-21392 *	US-PATENT-3,718,863	c 32	N73-20740 *	US-PATENT-3,749,911	c 14	N73-30389 *
US-PATENT-3,697,705	c 08	N73-12176 *	US-PATENT-3,718,891	c 10	N73-20254 *	US-PATENT-3,750,016	c 14	N73-30388 *
US-PATENT-3,697,733	c 08	N73-12177 *	US-PATENT-3,720,075	c 07	N73-25160 *	US-PATENT-3,750,035	c 33	N77-13315 *
US-PATENT-3,697,950	c 08	N73-12177 *	US-PATENT-3,720,208	c 33	N73-25952 *	US-PATENT-3,750,067	c 09	N73-30185 *
US-PATENT-3,697,968	c 21	N73-13644 *	US-PATENT-3,723,745	c 05	N73-25125 *	US-PATENT-3,750,131	c 10	N73-30205 *
US-PATENT-3,698,385	c 05	N73-13114 *	US-PATENT-3,728,861	c 14	N73-25462 *	US-PATENT-3,750,168	c 21	N73-30641 *
US-PATENT-3,698,412	c 14	N73-13418 *	US-PATENT-3,729,068	c 28	N73-24783 *	US-PATENT-3,750,479	c 05	N73-30078 *
US-PATENT-3,698,659	c 11	N73-13257 *	US-PATENT-3,729,129	c 15	N73-25512 *	US-PATENT-3,751,123	c 15	N73-30458 *
US-PATENT-3,698,667	c 02	N73-13008 *	US-PATENT-3,729,260	c 08	N73-25206 *	US-PATENT-3,751,727	c 05	N73-32012 *
US-PATENT-3,698,848	c 15	N73-13464 *	US-PATENT-3,729,343	c 14	N73-25463 *	US-PATENT-3,751,733	c 05	N73-32013 *
US-PATENT-3,699,511	c 21	N73-13643 *	US-PATENT-3,729,676	c 14	N73-24472 *	US-PATENT-3,751,913	c 06	N73-30097 *
US-PATENT-3,699,645	c 14	N73-13417 *	US-PATENT-3,729,736	c 14	N73-24473 *	US-PATENT-3,751,980	c 14	N73-32326 *
US-PATENT-3,699,799	c 15	N73-13463 *	US-PATENT-3,729,743	c 07	N73-25161 *	US-PATENT-3,752,556	c 35	N74-17153 *
US-PATENT-3,699,807	c 14	N73-13416 *	US-PATENT-3,729,935	c 07	N73-24176 *	US-PATENT-3,752,559	c 14	N73-30393 *
US-PATENT-3,699,811	c 14	N73-13415 *	US-PATENT-3,730,287	c 28	N73-24784 *	US-PATENT-3,752,665	c 23	N73-30666 *
US-PATENT-3,700,005	c 15	N73-13462 *	US-PATENT-3,730,891	c 11	N73-26238 *	US-PATENT-3,752,847	c 18	N73-32437 *
US-PATENT-3,700,192	c 31	N73-13898 *	US-PATENT-3,731,528	c 18	N73-26572 *	US-PATENT-3,752,986	c 06	N73-30098 *
US-PATENT-3,700,193	c 30	N73-12884 *	US-PATENT-3,731,531	c 12	N73-25262 *	US-PATENT-3,752,993	c 14	N73-30392 *
US-PATENT-3,700,291	c 15	N73-12488 *		c 14	N73-25460 *		c 21	N73-30640 *

US-PATENT-3,752,996	c 91	N74-13130 *	#	US-PATENT-3,782,177	c 38	N74-15395 *	#	US-PATENT-3,812,358	c 35	N74-26949 *	#
US-PATENT-3,753,148	c 09	N73-32111 *	#	US-PATENT-3,782,181	c 34	N74-15652 *	#	US-PATENT-3,812,783	c 28	N74-27425 *	#
US-PATENT-3,754,236	c 08	N73-32081 *	#	US-PATENT-3,782,205	c 35	N74-15094 *	#	US-PATENT-3,812,924	c 35	N74-26945 *	#
US-PATENT-3,754,263	c 09	N73-32110 *	#	US-PATENT-3,782,234	c 51	N74-15778 *	#	US-PATENT-3,812,936	c 37	N74-26976 *	#
US-PATENT-3,754,976	c 15	N73-32360 *	#	US-PATENT-3,782,698	c 35	N74-15093 *	#	US-PATENT-3,813,183	c 37	N74-25968 *	#
US-PATENT-3,755,265	c 06	N73-33076 *	#	US-PATENT-3,782,699	c 35	N74-15126 *	#	US-PATENT-3,813,875	c 15	N74-27360 *	#
US-PATENT-3,755,283	c 06	N73-32029 *	#	US-PATENT-3,782,737	c 37	N74-15125 *	#	US-PATENT-3,813,937	c 34	N74-27859 *	#
US-PATENT-3,755,686	c 03	N73-31988 *	#	US-PATENT-3,782,825	c 35	N74-15146 *	#	US-PATENT-3,814,083	c 52	N74-26626 *	#
US-PATENT-3,756,920	c 05	N73-32011 *	#	US-PATENT-3,782,835	c 74	N74-15095 *	#	US-PATENT-3,814,350	c 18	N74-27397 *	#
US-PATENT-3,757,183	c 09	N73-32107 *	#	US-PATENT-3,782,904	c 35	N74-15127 *	#	US-PATENT-3,814,645	c 24	N74-30001 *	#
US-PATENT-3,757,476	c 31	N73-32749 *	#	US-PATENT-3,783,250	c 62	N74-14920 *	#	US-PATENT-3,814,653	c 24	N74-27035 *	#
US-PATENT-3,757,568	c 14	N73-32323 *	#	US-PATENT-3,783,354	c 33	N74-14956 *	#	US-PATENT-3,814,678	c 25	N74-26948 *	#
US-PATENT-3,757,659	c 14	N73-32322 *	#	US-PATENT-3,783,399	c 33	N74-14939 *	#	US-PATENT-3,814,939	c 25	N74-26947 *	#
US-PATENT-3,758,112	c 05	N73-32014 *	#	US-PATENT-3,783,443	c 35	N74-16135 *	#	US-PATENT-3,815,048	c 33	N74-26732 *	#
US-PATENT-3,758,718	c 10	N73-32143 *	#	US-PATENT-3,784,499	c 27	N74-17283 *	#	US-PATENT-3,815,109	c 52	N74-26625 *	#
US-PATENT-3,758,741	c 15	N73-32358 *	#	US-PATENT-3,785,836	c 27	N82-29452 *	#	US-PATENT-3,815,205	c 33	N74-26977 *	#
US-PATENT-3,758,781	c 14	N73-32317 *	#	US-PATENT-3,787,959	c 37	N74-18128 *	#	US-PATENT-3,815,969	c 35	N74-26946 *	#
US-PATENT-3,758,877	c 16	N73-32391 *	#	US-PATENT-3,788,163	c 37	N74-18127 *	#	US-PATENT-3,816,657	c 32	N74-26654 *	#
US-PATENT-3,759,152	c 14	N73-32319 *	#	US-PATENT-3,789,654	c 25	N74-18551 *	#	US-PATENT-3,816,785	c 73	N74-26767 *	#
US-PATENT-3,759,249	c 05	N73-32015 *	#	US-PATENT-3,789,920	c 34	N74-18552 *	#	US-PATENT-3,817,082	c 34	N74-27730 *	#
US-PATENT-3,759,443	c 28	N73-32606 *	#	US-PATENT-3,789,947	c 37	N74-18125 *	#	US-PATENT-3,817,084	c 31	N74-27900 *	#
US-PATENT-3,759,588	c 15	N73-32359 *	#	US-PATENT-3,790,037	c 54	N74-17853 *	#	US-PATENT-3,817,622	c 75	N74-30156 *	#
US-PATENT-3,759,672	c 14	N73-32320 *	#	US-PATENT-3,790,347	c 37	N74-18123 *	#	US-PATENT-3,817,627	c 35	N74-27860 *	#
US-PATENT-3,759,746	c 09	N73-32108 *	#	US-PATENT-3,790,409	c 44	N74-19689 *	#	US-PATENT-3,818,325	c 44	N74-27519 *	#
US-PATENT-3,759,747	c 44	N74-19692 *	#	US-PATENT-3,790,432	c 37	N74-18126 *	#	US-PATENT-3,818,346	c 33	N74-27705 *	#
US-PATENT-3,759,787	c 22	N73-32528 *	#	US-PATENT-3,790,650	c 31	N74-18124 *	#	US-PATENT-3,818,767	c 35	N74-28097 *	#
US-PATENT-3,760,239	c 09	N73-32112 *	#	US-PATENT-3,790,795	c 35	N74-18088 *	#	US-PATENT-3,818,775	c 37	N74-27901 *	#
US-PATENT-3,760,248	c 10	N73-32145 *	#	US-PATENT-3,790,906	c 33	N74-17927 *	#	US-PATENT-3,818,814	c 31	N74-27902 *	#
US-PATENT-3,760,257	c 09	N73-32109 *	#	US-PATENT-3,791,207	c 09	N74-17955 *	#	US-PATENT-3,819,299	c 37	N74-27904 *	#
US-PATENT-3,760,268	c 14	N73-32318 *	#	US-PATENT-3,792,399	c 33	N74-17928 *	#	US-PATENT-3,819,419	c 34	N74-27861 *	#
US-PATENT-3,760,394	c 10	N73-32144 *	#	US-PATENT-3,793,109	c 31	N74-18089 *	#	US-PATENT-3,819,440	c 32	N74-27612 *	#
US-PATENT-3,762,884	c 17	N73-32414 *	#	US-PATENT-3,795,134	c 09	N74-19528 *	#	US-PATENT-3,819,550	c 27	N74-27037 *	#
US-PATENT-3,762,918	c 17	N73-32415 *	#	US-PATENT-3,795,448	c 72	N74-19310 *	#	US-PATENT-3,820,095	c 33	N74-27862 *	#
US-PATENT-3,763,204	c 06	N73-32030 *	#	US-PATENT-3,795,840	c 33	N74-17929 *	#	US-PATENT-3,820,286	c 37	N74-27905 *	#
US-PATENT-3,763,552	c 26	N73-32571 *	#	US-PATENT-3,795,858	c 35	N74-18090 *	#	US-PATENT-3,820,388	c 35	N74-27865 *	#
US-PATENT-3,763,691	c 14	N73-32327 *	#	US-PATENT-3,795,862	c 33	N74-17930 *	#	US-PATENT-3,820,529	c 52	N74-27864 *	#
US-PATENT-3,763,708	c 35	N74-18323 *	#	US-PATENT-3,795,900	c 35	N74-17885 *	#	US-PATENT-3,820,630	c 07	N74-27490 *	#
US-PATENT-3,763,740	c 11	N73-32152 *	#	US-PATENT-3,795,910	c 44	N74-19870 *	#	US-PATENT-3,820,741	c 37	N74-27903 *	#
US-PATENT-3,763,928	c 33	N73-32818 *	#	US-PATENT-3,796,473	c 37	N74-20063 *	#	US-PATENT-3,820,918	c 07	N74-28226 *	#
US-PATENT-3,764,097	c 02	N74-10034 *	#	US-PATENT-3,796,592	c 24	N74-19769 *	#	US-PATENT-3,821,102	c 34	N74-27744 *	#
US-PATENT-3,764,209	c 14	N73-33361 *	#	US-PATENT-3,797,098	c 37	N74-21057 *	#	US-PATENT-3,821,462	c 33	N74-27683 *	#
US-PATENT-3,764,220	c 16	N73-33397 *	#	US-PATENT-3,797,919	c 70	N74-21300 *	#	US-PATENT-3,821,546	c 33	N74-27682 *	#
US-PATENT-3,764,790	c 33	N74-10223 *	#	US-PATENT-3,798,741	c 31	N74-21059 *	#	US-PATENT-3,821,556	c 74	N74-27866 *	#
US-PATENT-3,764,850	c 33	N74-10195 *	#	US-PATENT-3,798,748	c 37	N74-21055 *	#	US-PATENT-3,824,707	c 09	N74-30597 *	#
US-PATENT-3,764,933	c 33	N74-10194 *	#	US-PATENT-3,798,778	c 19	N74-21015 *	#	US-PATENT-3,825,760	c 19	N74-29410 *	#
US-PATENT-3,765,229	c 35	N74-10415 *	#	US-PATENT-3,798,896	c 37	N74-21060 *	#	US-PATENT-3,826,448	c 08	N74-30421 *	#
US-PATENT-3,765,958	c 26	N74-10521 *	#	US-PATENT-3,799,149	c 52	N74-20728 *	#	US-PATENT-3,826,726	c 25	N74-30502 *	#
US-PATENT-3,766,315	c 32	N74-10132 *	#	US-PATENT-3,799,475	c 02	N74-20846 *	#	US-PATENT-3,826,729	c 20	N74-31269 *	#
US-PATENT-3,766,380	c 35	N74-11284 *	#	US-PATENT-3,799,793	c 74	N74-20008 *	#	US-PATENT-3,826,964	c 33	N74-29556 *	#
US-PATENT-3,767,212	c 37	N74-10474 *	#	US-PATENT-3,799,813	c 76	N74-20329 *	#	US-PATENT-3,827,288	c 71	N74-31148 *	#
US-PATENT-3,769,544	c 31	N78-17238 *	#	US-PATENT-3,800,074	c 36	N74-20009 *	#	US-PATENT-3,827,807	c 89	N74-30886 *	#
US-PATENT-3,769,623	c 32	N74-11000 *	#	US-PATENT-3,800,082	c 71	N74-21014 *	#	US-PATENT-3,828,137	c 32	N74-30524 *	#
US-PATENT-3,769,689	c 37	N74-11301 *	#	US-PATENT-3,800,224	c 32	N74-19790 *	#	US-PATENT-3,828,138	c 32	N74-30523 *	#
US-PATENT-3,769,834	c 52	N74-10975 *	#	US-PATENT-3,800,227	c 32	N74-20809 *	#	US-PATENT-3,828,524	c 34	N74-30608 *	#
US-PATENT-3,770,021	c 33	N74-11050 *	#	US-PATENT-3,800,237	c 32	N74-19788 *	#	US-PATENT-3,829,237	c 07	N74-31270 *	#
US-PATENT-3,770,903	c 35	N74-11283 *	#	US-PATENT-3,800,253	c 37	N74-21056 *	#	US-PATENT-3,829,839	c 60	N76-18800 *	#
US-PATENT-3,770,933	c 37	N74-11300 *	#	US-PATENT-3,801,617	c 37	N74-21058 *	#	US-PATENT-3,830,060	c 44	N74-33379 *	#
US-PATENT-3,771,037	c 08	N74-10942 *	#	US-PATENT-3,802,249	c 35	N74-21019 *	#	US-PATENT-3,830,094	c 35	N74-32879 *	#
US-PATENT-3,771,040	c 33	N74-11049 *	#	US-PATENT-3,802,253	c 52	N74-20726 *	#	US-PATENT-3,830,335	c 07	N74-32418 *	#
US-PATENT-3,771,074	c 36	N74-11313 *	#	US-PATENT-3,802,262	c 35	N74-21018 *	#	US-PATENT-3,830,431	c 07	N74-33218 *	#
US-PATENT-3,771,959	c 25	N74-12813 *	#	US-PATENT-3,802,660	c 37	N74-21065 *	#	US-PATENT-3,830,552	c 37	N74-32921 *	#
US-PATENT-3,772,174	c 27	N74-13270 *	#	US-PATENT-3,802,753	c 37	N74-21064 *	#	US-PATENT-3,830,609	c 31	N74-32920 *	#
US-PATENT-3,772,216	c 27	N74-12812 *	#	US-PATENT-3,802,779	c 74	N74-21304 *	#	US-PATENT-3,830,673	c 28	N74-33209 *	#
US-PATENT-3,772,220	c 27	N74-12814 *	#	US-PATENT-3,803,090	c 24	N74-21156 *	#	US-PATENT-3,831,098	c 33	N74-32711 *	#
US-PATENT-3,772,272	c 33	N74-12887 *	#	US-PATENT-3,803,393	c 60	N74-20836 *	#	US-PATENT-3,831,117	c 33	N74-32712 *	#
US-PATENT-3,772,418	c 31	N74-13177 *	#	US-PATENT-3,803,445	c 32	N74-20813 *	#	US-PATENT-3,831,142	c 32	N74-32598 *	#
US-PATENT-3,772,691	c 32	N74-12912 *	#	US-PATENT-3,803,617	c 32	N74-20863 *	#	US-PATENT-3,832,290	c 20	N74-32919 *	#
US-PATENT-3,773,038	c 52	N74-12778 *	#	US-PATENT-3,804,472	c 37	N74-21061 *	#	US-PATENT-3,832,735	c 54	N74-32546 *	#
US-PATENT-3,773,913	c 46	N74-13011 *	#	US-PATENT-3,804,506	c 33	N74-20861 *	#	US-PATENT-3,832,764	c 37	N74-32918 *	#
US-PATENT-3,775,101	c 37	N74-13179 *	#	US-PATENT-3,804,525	c 36	N74-21091 *	#	US-PATENT-3,832,781	c 35	N74-32877 *	#
US-PATENT-3,775,570	c 35	N78-29421 *	#	US-PATENT-3,804,703	c 37	N74-21063 *	#	US-PATENT-3,832,903	c 35	N74-32878 *	#
US-PATENT-3,776,028	c 35	N74-13129 *	#	US-PATENT-3,805,266	c 32	N74-20864 *	#	US-PATENT-3,833,322	c 31	N74-32917 *	#
US-PATENT-3,776,432	c 37	N74-13178 *	#	US-PATENT-3,805,303	c 54	N74-20725 *	#	US-PATENT-3,833,336	c 25	N74-33378 *	#
US-PATENT-3,776,455	c 04	N74-13420 *	#	US-PATENT-3,805,622	c 35	N74-21062 *	#	US-PATENT-3,833,857	c 33	N74-32660 *	#
US-PATENT-3,777,200	c 33	N74-12913 *	#	US-PATENT-3,806,756	c 33	N74-21850 *	#	US-PATENT-3,835,318	c 35	N74-34857 *	#
US-PATENT-3,777,490	c 20	N74-13502 *	#	US-PATENT-3,806,802	c 35	N74-21017 *	#	US-PATENT-3,837,285	c 85	N74-34672 *	#
US-PATENT-3,777,546	c 35	N74-13132 *	#	US-PATENT-3,806,815	c 32	N74-20811 *	#	US-PATENT-3,837,908	c 76	N79-16678 *	#
US-PATENT-3,777,552	c 38	N74-15130 *	#	US-PATENT-3,806,816	c 32	N74-20810 *	#	US-PATENT-3,840,829	c 33	N74-34638 *	#
US-PATENT-3,777,805	c 39	N74-13131 *	#	US-PATENT-3,806,831	c 33	N74-20862 *	#	US-PATENT-3,841,973	c 35	N75-12272 *	#
US-PATENT-3,777,811	c 34	N78-17336 *	#	US-PATENT-3,806,834	c 36	N76-18427 *	#	US-PATENT-3,842,485	c 37	N75-12326 *	#
US-PATENT-3,777,942	c 54	N74-12779 *	#	US-PATENT-3,806,835	c 33	N74-20859 *	#	US-PATENT-3,842,509	c 35	N75-12273 *	#
US-PATENT-3,778,685	c 33	N74-12951 *	#	US-PATENT-3,806,932	c 33	N74-20860 *	#	US-PATENT-3,842,656	c 76	N75-12810 *	#
US-PATENT-3,778,786	c 60	N74-12888 *	#	US-PATENT-3,807,384	c 34	N74-23039 *	#	US-PATENT-3,845,466	c 74	N81-19896 *	#
US-PATENT-3,778,791	c 36	N74-13205 *	#	US-PATENT-3,807,656	c 18	N74-22136 *	#	US-PATENT-3,846,243	c 25	N75-12086 *	#
US-PATENT-3,779,788	c 70	N74-13436 *	#	US-PATENT-3,808,464	c 33	N74-22814 *	#	US-PATENT-3,847,115	c 31	N75-12161 *	#
US-PATENT-3,780,151	c 31	N74-14133 *	#	US-PATENT-3,808,511	c 33	N74-22864 *	#	US-PATENT-3,847,141	c 35	N75-12271 *	#
US-PATENT-3,780,424	c 44	N74-14784 *	#	US-PATENT-3,808,517	c 33	N74-22885 *	#	US-PATENT-3,847,208	c 34	N75-12222 *	#
US-PATENT-3,7											

US-PATENT-3,850,169	c 54	N75-13531 *	US-PATENT-3,869,064	c 32	N75-26195 *	US-PATENT-3,925,312	c 23	N76-15298 *
US-PATENT-3,850,388	c 08	N75-12930 *	US-PATENT-3,869,122	c 37	N75-26372 *	US-PATENT-3,926,482	c 37	N76-15481 *
US-PATENT-3,850,587	c 31	N75-13111 *	US-PATENT-3,869,165	c 33	N75-26244 *	US-PATENT-3,926,587	c 27	N76-15311 *
US-PATENT-3,850,754	c 51	N75-13502 *	US-PATENT-3,869,182	c 33	N75-26245 *	US-PATENT-3,927,227	c 12	N76-15189 *
US-PATENT-3,851,182	c 80	N75-13539 *	US-PATENT-3,869,185	c 33	N75-26246 *	US-PATENT-3,927,324	c 35	N76-15433 *
US-PATENT-3,851,238	c 33	N75-13139 *	US-PATENT-3,869,284	c 32	N75-26194 *	US-PATENT-3,927,408	c 32	N76-15329 *
US-PATENT-3,851,250	c 15	N75-13007 *	US-PATENT-3,861,311	c 54	N75-27759 *	US-PATENT-3,928,708	c 27	N76-16230 *
US-PATENT-3,853,003	c 09	N75-12969 *	US-PATENT-3,861,452	c 27	N75-27180 *	US-PATENT-3,929,119	c 75	N76-17981 *
US-PATENT-3,853,075	c 09	N75-12968 *	US-PATENT-3,861,533	c 33	N75-27282 *	US-PATENT-3,929,305	c 34	N76-17317 *
US-PATENT-3,854,097	c 75	N75-13265 *	US-PATENT-3,861,848	c 45	N75-27585 *	US-PATENT-3,929,306	c 18	N76-17185 *
US-PATENT-3,854,113	c 37	N75-13265 *	US-PATENT-3,861,851	c 35	N75-27331 *	US-PATENT-3,929,364	c 35	N76-16392 *
US-PATENT-3,855,873	c 37	N75-13266 *	US-PATENT-3,863,449	c 54	N75-27760 *	US-PATENT-3,930,628	c 02	N76-16014 *
US-PATENT-3,856,042	c 37	N75-15050 *	US-PATENT-3,863,458	c 54	N75-27761 *	US-PATENT-3,930,735	c 68	N76-19888 *
US-PATENT-3,856,402	c 36	N75-15028 *	US-PATENT-3,863,573	c 18	N75-27041 *	US-PATENT-3,931,132	c 27	N76-16228 *
US-PATENT-3,856,471	c 25	N75-14844 *	US-PATENT-3,864,269	c 36	N75-27964 *	US-PATENT-3,931,447	c 27	N76-16229 *
US-PATENT-3,856,534	c 23	N75-14834 *	US-PATENT-3,864,677	c 24	N75-28135 *	US-PATENT-3,931,456	c 33	N76-16332 *
US-PATENT-3,857,031	c 35	N75-15014 *	US-PATENT-3,864,887	c 44	N76-18641 *	US-PATENT-3,931,462	c 45	N76-17656 *
US-PATENT-3,857,045	c 33	N75-14957 *	US-PATENT-3,865,521	c 35	N75-29381 *	US-PATENT-3,931,518	c 35	N76-16393 *
US-PATENT-3,859,119	c 36	N75-15029 *	US-PATENT-3,865,812	c 35	N75-29380 *	US-PATENT-3,931,532	c 44	N76-16812 *
US-PATENT-3,859,714	c 37	N75-15992 *	US-PATENT-3,866,758	c 35	N75-33367 *	US-PATENT-3,932,262	c 25	N79-10163 *
US-PATENT-3,859,714	c 24	N79-25143 *	US-PATENT-3,866,855	c 37	N77-22480 *	US-PATENT-3,936,827	c 37	N76-19437 *
US-PATENT-3,859,738	c 09	N75-15682 *	US-PATENT-3,868,578	c 33	N75-30428 *	US-PATENT-3,937,055	c 37	N76-18454 *
US-PATENT-3,859,840	c 35	N75-15932 *	US-PATENT-3,868,730	c 24	N75-30280 *	US-PATENT-3,937,212	c 33	N76-19338 *
US-PATENT-3,859,845	c 35	N75-15931 *	US-PATENT-3,868,882	c 35	N75-30503 *	US-PATENT-3,937,215	c 52	N76-19785 *
US-PATENT-3,860,342	c 35	N75-16783 *	US-PATENT-3,869,224	c 37	N75-30582 *	US-PATENT-3,937,387	c 37	N76-18455 *
US-PATENT-3,860,393	c 25	N76-18245 *	US-PATENT-3,869,252	c 35	N75-30502 *	US-PATENT-3,937,533	c 37	N76-18459 *
US-PATENT-3,860,858	c 33	N75-15874 *	US-PATENT-3,869,517	c 23	N75-30256 *	US-PATENT-3,937,555	c 35	N76-18402 *
US-PATENT-3,860,821	c 32	N75-15854 *	US-PATENT-3,869,680	c 73	N75-30676 *	US-PATENT-3,937,661	c 37	N76-18456 *
US-PATENT-3,860,946	c 37	N79-11314 *	US-PATENT-3,869,696	c 36	N75-30524 *	US-PATENT-3,937,945	c 74	N76-18913 *
US-PATENT-3,863,881	c 37	N75-18573 *	US-PATENT-3,869,745	c 33	N75-30429 *	US-PATENT-3,938,035	c 33	N76-19339 *
US-PATENT-3,864,060	c 35	N75-19611 *	US-PATENT-3,890,705	c 33	N75-30431 *	US-PATENT-3,938,037	c 26	N76-18257 *
US-PATENT-3,864,239	c 37	N75-19684 *	US-PATENT-3,890,741	c 35	N75-30504 *	US-PATENT-3,938,162	c 32	N76-18295 *
US-PATENT-3,864,542	c 37	N75-19683 *	US-PATENT-3,900,847	c 33	N75-30132 *	US-PATENT-3,938,182	c 33	N76-18353 *
US-PATENT-3,864,797	c 20	N75-18310 *	US-PATENT-3,902,143	c 33	N75-30430 *	US-PATENT-3,938,188	c 33	N76-18345 *
US-PATENT-3,864,953	c 35	N75-19615 *	US-PATENT-3,903,699	c 44	N75-32581 *	US-PATENT-3,938,367	c 35	N76-18401 *
US-PATENT-3,864,960	c 35	N75-19612 *	US-PATENT-3,905,358	c 33	N75-31329 *	US-PATENT-3,938,373	c 35	N76-18400 *
US-PATENT-3,865,442	c 37	N75-18574 *	US-PATENT-3,905,660	c 37	N75-31446 *	US-PATENT-3,938,742	c 07	N76-18117 *
US-PATENT-3,865,975	c 36	N75-19652 *	US-PATENT-3,906,231	c 33	N75-31332 *	US-PATENT-3,938,892	c 74	N76-19935 *
US-PATENT-3,866,022	c 33	N75-19519 *	US-PATENT-3,906,296	c 33	N75-31331 *	US-PATENT-3,938,956	c 35	N76-18403 *
US-PATENT-3,866,114	c 33	N75-18477 *	US-PATENT-3,906,374	c 33	N75-31330 *	US-PATENT-3,939,048	c 37	N76-18458 *
US-PATENT-3,866,128	c 33	N75-19515 *	US-PATENT-3,906,393	c 36	N75-31427 *	US-PATENT-3,939,439	c 36	N76-18428 *
US-PATENT-3,866,210	c 33	N75-19517 *	US-PATENT-3,906,397	c 36	N75-31426 *	US-PATENT-3,940,097	c 34	N76-18364 *
US-PATENT-3,866,233	c 33	N75-19516 *	US-PATENT-3,906,398	c 36	N75-32441 *	US-PATENT-3,940,621	c 34	N76-18374 *
US-PATENT-3,866,863	c 18	N75-19329 *	US-PATENT-3,906,769	c 24	N75-33181 *	US-PATENT-3,941,355	c 37	N76-19336 *
US-PATENT-3,867,677	c 33	N75-19524 *	US-PATENT-3,906,788	c 35	N75-33369 *	US-PATENT-3,942,398	c 37	N76-20480 *
US-PATENT-3,868,591	c 36	N75-19655 *	US-PATENT-3,906,913	c 37	N76-18457 *	US-PATENT-3,943,368	c 74	N76-20958 *
US-PATENT-3,868,830	c 77	N75-20139 *	US-PATENT-3,906,954	c 52	N75-33640 *	US-PATENT-3,943,442	c 76	N76-20994 *
US-PATENT-3,868,856	c 35	N75-19614 *	US-PATENT-3,907,312	c 37	N75-33395 *	US-PATENT-3,943,763	c 04	N76-20114 *
US-PATENT-3,869,151	c 37	N75-19686 *	US-PATENT-3,907,646	c 35	N75-33368 *	US-PATENT-3,944,485	c 25	N81-19244 *
US-PATENT-3,869,160	c 37	N75-19685 *	US-PATENT-3,907,686	c 34	N75-33342 *	US-PATENT-3,945,801	c 45	N76-21742 *
US-PATENT-3,869,210	c 36	N75-19683 *	US-PATENT-3,908,118	c 38	N78-17395 *	US-PATENT-3,945,879	c 37	N76-21554 *
US-PATENT-3,869,212	c 35	N75-19613 *	US-PATENT-3,908,602	c 38	N78-17396 *	US-PATENT-3,947,281	c 27	N82-29455 *
US-PATENT-3,869,597	c 77	N75-20140 *	US-PATENT-3,910,035	c 20	N76-14190 *	US-PATENT-3,947,933	c 20	N76-21276 *
US-PATENT-3,869,615	c 35	N75-19618 *	US-PATENT-3,910,039	c 20	N76-14191 *	US-PATENT-3,948,102	c 33	N76-21300 *
US-PATENT-3,869,624	c 33	N75-18479 *	US-PATENT-3,910,257	c 52	N76-14757 *	US-PATENT-3,948,470	c 20	N76-21275 *
US-PATENT-3,869,659	c 33	N75-19522 *	US-PATENT-3,910,307	c 37	N76-14463 *	US-PATENT-3,949,206	c 32	N76-21366 *
US-PATENT-3,869,667	c 33	N75-19521 *	US-PATENT-3,910,533	c 18	N76-14186 *	US-PATENT-3,949,400	c 17	N76-21250 *
US-PATENT-3,869,676	c 33	N75-19520 *	US-PATENT-3,910,814	c 24	N76-14204 *	US-PATENT-3,949,404	c 32	N76-21365 *
US-PATENT-3,869,680	c 36	N75-19654 *	US-PATENT-3,911,260	c 35	N76-14431 *	US-PATENT-3,950,728	c 60	N76-21914 *
US-PATENT-3,869,779	c 26	N75-19408 *	US-PATENT-3,911,330	c 33	N76-14373 *	US-PATENT-3,951,129	c 44	N76-22657 *
US-PATENT-3,872,395	c 33	N75-19518 *	US-PATENT-3,912,540	c 44	N76-14600 *	US-PATENT-3,952,083	c 27	N76-22378 *
US-PATENT-3,874,240	c 35	N75-25122 *	US-PATENT-3,912,541	c 44	N76-14601 *	US-PATENT-3,952,580	c 09	N76-23273 *
US-PATENT-3,874,635	c 37	N75-25185 *	US-PATENT-3,912,999	c 44	N76-18843 *	US-PATENT-3,952,971	c 02	N76-22154 *
US-PATENT-3,874,677	c 32	N75-21631 *	US-PATENT-3,914,950	c 31	N76-14284 *	US-PATENT-3,952,976	c 37	N76-22540 *
US-PATENT-3,875,332	c 33	N75-21486 *	US-PATENT-3,914,969	c 37	N76-14461 *	US-PATENT-3,952,980	c 19	N76-22284 *
US-PATENT-3,875,394	c 33	N75-26243 *	US-PATENT-3,914,991	c 35	N76-14430 *	US-PATENT-3,952,998	c 20	N76-22296 *
US-PATENT-3,875,404	c 35	N75-23910 *	US-PATENT-3,914,997	c 35	N76-14429 *	US-PATENT-3,953,038	c 37	N76-22541 *
US-PATENT-3,875,435	c 20	N75-24837 *	US-PATENT-3,915,012	c 54	N76-14804 *	US-PATENT-3,953,343	c 24	N76-22309 *
US-PATENT-3,875,500	c 35	N75-21582 *	US-PATENT-3,915,148	c 44	N76-14602 *	US-PATENT-3,953,646	c 27	N76-22377 *
US-PATENT-3,875,584	c 32	N75-21485 *	US-PATENT-3,915,416	c 15	N76-14158 *	US-PATENT-3,953,674	c 17	N76-22245 *
US-PATENT-3,877,833	c 37	N75-25186 *	US-PATENT-3,915,482	c 37	N76-14460 *	US-PATENT-3,953,734	c 25	N76-22323 *
US-PATENT-3,878,464	c 32	N75-24981 *	US-PATENT-3,915,572	c 36	N76-14447 *	US-PATENT-3,953,792	c 35	N76-22509 *
US-PATENT-3,881,132	c 33	N77-21315 *	US-PATENT-3,916,060	c 27	N76-15310 *	US-PATENT-3,955,034	c 27	N76-23426 *
US-PATENT-3,882,417	c 36	N78-17366 *	US-PATENT-3,916,084	c 33	N76-14371 *	US-PATENT-3,955,941	c 44	N76-29700 *
US-PATENT-3,882,530	c 76	N75-25730 *	US-PATENT-3,916,187	c 35	N76-15431 *	US-PATENT-3,956,032	c 76	N76-25049 *
US-PATENT-3,882,634	c 51	N75-25503 *	US-PATENT-3,916,316	c 32	N76-14321 *	US-PATENT-3,956,050	c 37	N76-24575 *
US-PATENT-3,882,719	c 14	N75-24794 *	US-PATENT-3,916,380	c 60	N76-14818 *	US-PATENT-3,956,233	c 27	N76-24405 *
US-PATENT-3,882,732	c 12	N75-24774 *	US-PATENT-3,916,761	c 75	N76-14931 *	US-PATENT-3,956,833	c 09	N76-24280 *
US-PATENT-3,882,846	c 05	N75-24716 *	US-PATENT-3,919,014	c 24	N76-14203 *	US-PATENT-3,956,919	c 35	N76-24523 *
US-PATENT-3,883,095	c 07	N75-24736 *	US-PATENT-3,919,710	c 33	N76-14372 *	US-PATENT-3,956,932	c 35	N76-24524 *
US-PATENT-3,883,215	c 35	N75-25124 *	US-PATENT-3,920,339	c 27	N76-14264 *	US-PATENT-3,957,030	c 44	N76-23675 *
US-PATENT-3,883,436	c 74	N75-25706 *	US-PATENT-3,920,413	c 44	N76-14595 *	US-PATENT-3,957,037	c 35	N76-24525 *
US-PATENT-3,883,689	c 35	N75-25123 *	US-PATENT-3,920,416	c 44	N76-18642 *	US-PATENT-3,957,044	c 54	N76-24900 *
US-PATENT-3,883,785	c 09	N75-24758 *	US-PATENT-3,922,930	c 37	N76-15457 *	US-PATENT-3,957,104	c 37	N76-23570 *
US-PATENT-3,883,812	c 33	N75-25041 *	US-PATENT-3,923,166	c 37	N76-15460 *	US-PATENT-3,957,675	c 24	N76-24663 *
US-PATENT-3,883,817	c 33	N75-25040 *	US-PATENT-3,924,068	c 32	N76-16249 *	US-PATENT-3,958,188	c 36	N76-24553 *
US-PATENT-3,883,872	c 32	N75-24982 *	US-PATENT-3,924,137	c 72	N76-15860 *	US-PATENT-3,958,238	c 60	N76-23850 *
US-PATENT-3,884,432	c 05	N75-25914 *	US-PATENT-3,924,164	c 33	N76-15373 *	US-PATENT-3,958,553	c 44	N76-24696 *
US-PATENT-3,884,765	c 35	N75-27330 *	US-PATENT-3,924,176	c 35	N76-16390 *	US-PATENT-3,961,997	c 44	N76-28835 *
US-PATENT-3,887,233	c 05	N75-25915 *	US-PATENT-3,924,183	c 33	N76-16331 *	US-PATENT-3,964,306	c 34	N76-27517 *
US-PATENT-3,887,345	c 35	N75-26334 *	US-PATENT-3,924,200	c 35	N76-15436 *	US-PATENT-3,964,319	c 07	N76-27232 *
US-PATENT-3,887,365	c 37	N75-26371 *	US-PATENT-3,924,237	c 32	N76-15330 *	US-PATENT-3,964,813	c 37	N76-27567 *
US-PATENT-3,888,362	c 54	N75-27758 *	US-PATENT-3,924,239	c 35	N76-15435 *	US-PATENT-3,964,902	c 34	N76-27515 *
US-PATENT-3,888,410	c 34	N75-26282 *	US-PATENT-3,924,267	c 35	N76-16391 *	US-PATENT-3,964,928	c 44	N76-27664 *
US-PATENT-3,888,561	c 35	N75-27328 *	US-PATENT-3,924,444	c 35	N76-15432 *	US-PATENT-3,965,096	c 27	N76-32315 *
US-PATENT-3,888,705	c 25	N75-26043 *	US-PATENT-3,925,104	c 35	N76-15434 *	US-PATENT-3,965,354	c 33	N76-27473 *

US-PATENT-3,965,475	c 33	N76-27472 *	#	US-PATENT-4,003,257	c 23	N77-17161 *	#	US-PATENT-4,045,063	c 37	N77-32499 *	#
US-PATENT-3,966,499	c 44	N76-31666 *	#	US-PATENT-4,004,292	c 74	N77-18893 *	#	US-PATENT-4,045,149	c 07	N77-32148 *	#
US-PATENT-3,966,547	c 25	N76-27383 *	#	US-PATENT-4,005,574	c 07	N77-17059 *	#	US-PATENT-4,045,247	c 35	N77-32454 *	#
US-PATENT-3,967,091	c 37	N76-27568 *	#	US-PATENT-4,006,631	c 04	N77-19056 *	#	US-PATENT-4,045,255	c 26	N77-32279 *	#
US-PATENT-3,971,230	c 37	N76-29590 *	#	US-PATENT-4,006,999	c 24	N77-19170 *	#	US-PATENT-4,045,315	c 44	N77-32580 *	#
US-PATENT-3,971,256	c 91	N76-30131 *	#	US-PATENT-4,007,430	c 36	N77-19416 *	#	US-PATENT-4,045,359	c 25	N77-32255 *	#
US-PATENT-3,971,362	c 52	N76-29894 *	#	US-PATENT-4,007,434	c 32	N77-18307 *	#	US-PATENT-4,045,728	c 35	N77-32455 *	#
US-PATENT-3,971,363	c 52	N76-29895 *	#	US-PATENT-4,007,601	c 34	N77-19353 *	#	US-PATENT-4,045,792	c 60	N77-32731 *	#
US-PATENT-3,971,364	c 52	N76-29896 *	#	US-PATENT-4,007,623	c 35	N77-18417 *	#	US-PATENT-4,045,795	c 32	N77-32342 *	#
US-PATENT-3,971,535	c 05	N76-29217 *	#	US-PATENT-4,007,891	c 07	N77-18154 *	#	US-PATENT-4,046,012	c 35	N77-32456 *	#
US-PATENT-3,971,602	c 37	N76-29588 *	#	US-PATENT-4,008,348	c 34	N77-18382 *	#	US-PATENT-4,046,190	c 34	N77-32413 *	#
US-PATENT-3,971,697	c 25	N76-29379 *	#	US-PATENT-4,008,407	c 73	N77-18891 *	#	US-PATENT-4,046,262	c 54	N77-32721 *	#
US-PATENT-3,971,703	c 51	N76-29891 *	#	US-PATENT-4,010,455	c 37	N77-19458 *	#	US-PATENT-4,046,434	c 37	N77-32500 *	#
US-PATENT-3,971,847	c 44	N76-29704 *	#	US-PATENT-4,010,455	c 37	N78-31426 *	#	US-PATENT-4,046,435	c 37	N77-32501 *	#
US-PATENT-3,971,915	c 35	N76-29552 *	#	US-PATENT-4,011,719	c 20	N77-20162 *	#	US-PATENT-4,046,462	c 44	N77-32583 *	#
US-PATENT-3,971,930	c 74	N76-30053 *	#	US-PATENT-4,011,756	c 35	N77-20400 *	#	US-PATENT-4,046,529	c 54	N77-32722 *	#
US-PATENT-3,971,940	c 35	N76-29551 *	#	US-PATENT-4,011,854	c 35	N77-20401 *	#	US-PATENT-4,046,560	c 26	N77-32280 *	#
US-PATENT-3,972,008	c 36	N76-29575 *	#	US-PATENT-4,012,018	c 35	N77-20399 *	#	US-PATENT-4,046,617	c 76	N77-32919 *	#
US-PATENT-3,972,038	c 17	N76-29347 *	#	US-PATENT-4,012,123	c 74	N77-20882 *	#	US-PATENT-4,046,619	c 27	N77-32308 *	#
US-PATENT-3,972,651	c 44	N76-29701 *	#	US-PATENT-4,012,237	c 26	N77-20201 *	#	US-PATENT-4,047,840	c 37	N78-10468 *	#
US-PATENT-3,972,727	c 44	N76-29699 *	#	US-PATENT-4,012,696	c 32	N77-20289 *	#	US-PATENT-4,051,558	c 52	N78-10686 *	#
US-PATENT-3,976,997	c 62	N76-31946 *	#	US-PATENT-4,014,745	c 51	N77-22794 *	#	US-PATENT-4,051,834	c 44	N78-10554 *	#
US-PATENT-3,977,147	c 39	N76-31562 *	#	US-PATENT-4,014,798	c 25	N81-17187 *	#	US-PATENT-4,051,877	c 35	N78-10428 *	#
US-PATENT-3,977,197	c 44	N76-31667 *	#	US-PATENT-4,017,959	c 37	N77-23482 *	#	US-PATENT-4,052,144	c 25	N78-10224 *	#
US-PATENT-3,977,231	c 35	N76-31489 *	#	US-PATENT-4,018,080	c 35	N77-22450 *	#	US-PATENT-4,052,181	c 71	N78-10837 *	#
US-PATENT-3,977,771	c 74	N76-31998 *	#	US-PATENT-4,018,085	c 35	N77-22449 *	#	US-PATENT-4,052,302	c 25	N78-10225 *	#
US-PATENT-3,977,787	c 35	N76-31490 *	#	US-PATENT-4,018,092	c 37	N77-22482 *	#	US-PATENT-4,052,523	c 24	N78-10214 *	#
US-PATENT-3,977,831	c 45	N76-31714 *	#	US-PATENT-4,018,409	c 37	N77-23483 *	#	US-PATENT-4,052,614	c 35	N78-10429 *	#
US-PATENT-3,978,187	c 37	N76-31524 *	#	US-PATENT-4,018,423	c 54	N77-21844 *	#	US-PATENT-4,052,648	c 33	N78-10376 *	#
US-PATENT-3,978,287	c 32	N76-31372 *	#	US-PATENT-4,018,532	c 74	N77-22951 *	#	US-PATENT-4,052,659	c 33	N78-10377 *	#
US-PATENT-3,978,360	c 33	N76-31409 *	#	US-PATENT-4,018,533	c 74	N77-22950 *	#	US-PATENT-4,052,666	c 43	N78-10529 *	#
US-PATENT-3,978,364	c 31	N76-31365 *	#	US-PATENT-4,018,649	c 51	N77-25769 *	#	US-PATENT-4,052,705	c 60	N78-10709 *	#
US-PATENT-3,978,410	c 03	N76-32140 *	#	US-PATENT-4,018,971	c 44	N77-22606 *	#	US-PATENT-4,053,229	c 74	N78-13874 *	#
US-PATENT-3,978,417	c 36	N76-31512 *	#	US-PATENT-4,019,179	c 32	N77-21267 *	#	US-PATENT-4,053,231	c 35	N78-18391 *	#
US-PATENT-3,978,490	c 33	N76-32457 *	#	US-PATENT-4,019,868	c 44	N77-22607 *	#	US-PATENT-4,053,918	c 44	N78-13526 *	#
US-PATENT-3,982,910	c 44	N77-10636 *	#	US-PATENT-4,020,632	c 07	N77-23106 *	#	US-PATENT-4,055,004	c 09	N78-18083 *	#
US-PATENT-3,983,695	c 20	N77-10148 *	#	US-PATENT-4,023,266	c 33	N77-26385 *	#	US-PATENT-4,055,041	c 07	N78-18066 *	#
US-PATENT-3,983,714	c 31	N77-10229 *	#	US-PATENT-4,025,327	c 35	N77-24455 *	#	US-PATENT-4,055,072	c 35	N78-19465 *	#
US-PATENT-3,983,749	c 09	N77-10071 *	#	US-PATENT-4,025,783	c 74	N77-26942 *	#	US-PATENT-4,055,089	c 35	N78-18390 *	#
US-PATENT-3,983,753	c 52	N77-10780 *	#	US-PATENT-4,025,866	c 33	N77-24375 *	#	US-PATENT-4,055,147	c 35	N78-19466 *	#
US-PATENT-3,983,780	c 28	N77-10213 *	#	US-PATENT-4,025,875	c 36	N77-25499 *	#	US-PATENT-4,055,416	c 26	N78-18182 *	#
US-PATENT-3,983,933	c 34	N77-10463 *	#	US-PATENT-4,025,876	c 71	N77-26919 *	#	US-PATENT-4,055,447	c 26	N78-18183 *	#
US-PATENT-3,984,070	c 02	N77-10001 *	#	US-PATENT-4,025,891	c 35	N77-24454 *	#	US-PATENT-4,055,686	c 37	N78-13436 *	#
US-PATENT-3,984,072	c 15	N77-10113 *	#	US-PATENT-4,025,895	c 32	N77-24328 *	#	US-PATENT-4,055,705	c 34	N78-18355 *	#
US-PATENT-3,984,256	c 44	N77-10635 *	#	US-PATENT-4,025,964	c 52	N77-25772 *	#	US-PATENT-4,055,707	c 44	N78-19599 *	#
US-PATENT-3,984,634	c 32	N77-10392 *	#	US-PATENT-4,026,527	c 34	N77-24423 *	#	US-PATENT-4,055,764	c 35	N78-13400 *	#
US-PATENT-3,984,671	c 43	N77-10584 *	#	US-PATENT-4,026,655	c 36	N77-25501 *	#	US-PATENT-4,055,777	c 33	N78-18308 *	#
US-PATENT-3,984,681	c 35	N77-10492 *	#	US-PATENT-4,027,212	c 33	N77-26386 *	#	US-PATENT-4,055,810	c 36	N78-18410 *	#
US-PATENT-3,984,685	c 47	N77-10753 *	#	US-PATENT-4,027,265	c 32	N77-24331 *	#	US-PATENT-4,055,847	c 33	N78-13320 *	#
US-PATENT-3,984,686	c 35	N77-10493 *	#	US-PATENT-4,027,273	c 36	N77-25502 *	#	US-PATENT-4,061,029	c 35	N78-14364 *	#
US-PATENT-3,984,730	c 33	N77-10429 *	#	US-PATENT-4,027,494	c 35	N78-12390 *	#	US-PATENT-4,061,041	c 71	N78-14867 *	#
US-PATENT-3,984,799	c 33	N77-10428 *	#	US-PATENT-4,027,524	c 09	N77-27131 *	#	US-PATENT-4,061,146	c 52	N78-14773 *	#
US-PATENT-3,985,454	c 74	N77-10899 *	#	US-PATENT-4,028,939	c 34	N77-27345 *	#	US-PATENT-4,061,190	c 43	N78-14452 *	#
US-PATENT-3,987,630	c 37	N77-12402 *	#	US-PATENT-4,029,470	c 51	N77-27677 *	#	US-PATENT-4,061,427	c 36	N78-14380 *	#
US-PATENT-3,988,561	c 37	N77-11397 *	#	US-PATENT-4,029,500	c 24	N77-27187 *	#	US-PATENT-4,061,561	c 25	N78-14104 *	#
US-PATENT-3,988,677	c 32	N77-12240 *	#	US-PATENT-4,029,838	c 24	N77-27188 *	#	US-PATENT-4,061,570	c 54	N78-14784 *	#
US-PATENT-3,988,716	c 60	N77-12721 *	#	US-PATENT-4,030,047	c 35	N77-27366 *	#	US-PATENT-4,061,577	c 74	N78-14889 *	#
US-PATENT-3,988,729	c 32	N77-12239 *	#	US-PATENT-4,030,348	c 39	N78-10493 *	#	US-PATENT-4,061,579	c 24	N78-14096 *	#
US-PATENT-3,988,933	c 35	N77-19385 *	#	US-PATENT-4,031,389	c 36	N77-26477 *	#	US-PATENT-4,061,812	c 24	N78-15180 *	#
US-PATENT-3,989,136	c 37	N77-19457 *	#	US-PATENT-4,032,089	c 24	N77-28225 *	#	US-PATENT-4,061,834	c 27	N78-14164 *	#
US-PATENT-3,989,206	c 09	N77-19076 *	#	US-PATENT-4,032,089	c 27	N81-14077 *	#	US-PATENT-4,061,856	c 27	N78-15276 *	#
US-PATENT-3,989,541	c 44	N77-19571 *	#	US-PATENT-4,033,119	c 07	N77-28118 *	#	US-PATENT-4,061,955	c 44	N78-14625 *	#
US-PATENT-3,989,602	c 24	N77-19171 *	#	US-PATENT-4,033,133	c 28	N80-10374 *	#	US-PATENT-4,061,974	c 32	N78-15323 *	#
US-PATENT-3,990,049	c 60	N77-19760 *	#	US-PATENT-4,033,182	c 39	N77-28511 *	#	US-PATENT-4,062,227	c 39	N78-15512 *	#
US-PATENT-3,990,860	c 27	N77-13217 *	#	US-PATENT-4,033,286	c 25	N79-28253 *	#	US-PATENT-4,062,245	c 37	N78-16369 *	#
US-PATENT-3,990,987	c 37	N77-13418 *	#	US-PATENT-4,033,316	c 33	N77-28385 *	#	US-PATENT-4,062,347	c 44	N78-15560 *	#
US-PATENT-3,994,128	c 07	N77-14025 *	#	US-PATENT-4,033,334	c 52	N77-28717 *	#	US-PATENT-4,062,650	c 25	N78-15210 *	#
US-PATENT-3,995,324	c 52	N77-14735 *	#	US-PATENT-4,033,479	c 52	N77-28716 *	#	US-PATENT-4,062,996	c 74	N78-15879 *	#
US-PATENT-3,995,476	c 35	N77-14407 *	#	US-PATENT-4,033,479	c 37	N77-28487 *	#	US-PATENT-4,063,088	c 74	N78-15880 *	#
US-PATENT-3,995,522	c 37	N77-14478 *	#	US-PATENT-4,033,503	c 26	N77-29260 *	#	US-PATENT-4,063,092	c 35	N78-15461 *	#
US-PATENT-3,995,621	c 52	N77-14736 *	#	US-PATENT-4,033,504	c 26	N77-28265 *	#	US-PATENT-4,063,282	c 39	N78-16387 *	#
US-PATENT-3,995,644	c 52	N77-14738 *	#	US-PATENT-4,033,705	c 07	N77-27116 *	#	US-PATENT-4,063,814	c 74	N78-17866 *	#
US-PATENT-3,995,789	c 37	N77-14479 *	#	US-PATENT-4,033,882	c 32	N77-28346 *	#	US-PATENT-4,063,981	c 24	N78-17149 *	#
US-PATENT-3,995,877	c 37	N77-14477 *	#	US-PATENT-4,035,037	c 37	N77-28486 *	#	US-PATENT-4,064,566	c 27	N78-17215 *	#
US-PATENT-3,995,960	c 35	N77-14411 *	#	US-PATENT-4,035,062	c 74	N77-28932 *	#	US-PATENT-4,064,642	c 54	N78-17675 *	#
US-PATENT-3,996,064	c 44	N77-14581 *	#	US-PATENT-4,035,065	c 74	N77-28933 *	#	US-PATENT-4,064,692	c 37	N78-17384 *	#
US-PATENT-3,996,067	c 44	N77-14580 *	#	US-PATENT-4,038,705	c 54	N77-30749 *	#	US-PATENT-4,065,053	c 44	N78-17460 *	#
US-PATENT-3,996,070	c 35	N77-14409 *	#	US-PATENT-4,039,489	c 27	N77-31308 *	#	US-PATENT-4,065,202	c 35	N78-17357 *	#
US-PATENT-3,996,455	c 60	N77-14751 *	#	US-PATENT-4,039,946	c 35	N77-30436 *	#	US-PATENT-4,065,340	c 24	N78-17150 *	#
US-PATENT-3,996,462	c 33	N77-14335 *	#	US-PATENT-4,039,000	c 34	N77-30399 *	#	US-PATENT-4,065,345	c 27	N78-17205 *	#
US-PATENT-3,996,464	c 35	N77-14406 *	#	US-PATENT-4,039,347	c 27	N77-30237 *	#	US-PATENT-4,066,039	c 37	N78-17383 *	#
US-PATENT-3,996,468	c 35	N77-14408 *	#	US-PATENT-4,039,754	c 32	N77-30309 *	#	US-PATENT-4,067,015	c 17	N78-17140 *	#
US-PATENT-3,996,471	c 52	N77-14737 *	#	US-PATENT-4,039,925	c 33	N77-30365 *	#	US-PATENT-4,067,043	c 74	N78-17865 *	#
US-PATENT-3,996,506	c 33	N77-14333 *	#	US-PATENT-4,040,041	c 33	N77-31404 *	#	US-PATENT-4,067,653	c 74	N78-17867 *	#
US-PATENT-3,996,532	c 32	N77-14292 *	#	US-PATENT-4,040,750	c 35	N77-31465 *	#	US-PATENT-4,067,742	c 27	N78-17206 *	#
US-PATENT-3,997,848	c 33	N77-14334 *	#	US-PATENT-4,040,867	c 44	N77-31601 *	#	US-PATENT-4,068,469	c 07	N78-17055 *	#
US-PATENT-3,999,886	c 05	N77-17029 *	#	US-PATENT-4,040,940	c 37	N80-14397 *	#	US-PATENT-4,068,470	c 07	N78-17056 *	#
US-PATENT-4,0											



US-PATENT-4,077,231	c 31	N78-25256 *	US-PATENT-4,104,084	c 44	N79-11467 *	US-PATENT-4,135,851	c 37	N79-18318 *
US-PATENT-4,077,678	c 44	N78-24608 *	US-PATENT-4,104,091	c 44	N79-11468 *	US-PATENT-4,135,851	c 37	N80-26658 *
US-PATENT-4,077,788	c 28	N78-24365 *	US-PATENT-4,104,134	c 44	N79-11469 *	US-PATENT-4,135,851	c 37	N82-19540 *
US-PATENT-4,077,813	c 28	N81-14103 *	US-PATENT-4,104,134	c 44	N80-16452 *	US-PATENT-4,136,211	c 24	N79-17916 *
US-PATENT-4,077,813	c 26	N78-24333 *	US-PATENT-4,104,873	c 37	N79-11403 *	US-PATENT-4,137,010	c 05	N79-17847 *
US-PATENT-4,077,818	c 44	N78-24609 *	US-PATENT-4,105,261	c 37	N79-11404 *	US-PATENT-4,137,365	c 27	N79-18052 *
US-PATENT-4,077,921	c 24	N78-24290 *	US-PATENT-4,105,517	c 44	N79-11470 *	US-PATENT-4,139,201	c 74	N79-20856 *
US-PATENT-4,078,110	c 34	N78-25350 *	US-PATENT-4,105,966	c 33	N79-11315 *	US-PATENT-4,139,806	c 71	N79-20827 *
US-PATENT-4,078,175	c 76	N78-24950 *	US-PATENT-4,106,218	c 74	N79-13855 *	US-PATENT-4,139,839	c 60	N79-20751 *
US-PATENT-4,078,290	c 37	N78-24544 *	US-PATENT-4,106,587	c 71	N79-14871 *	US-PATENT-4,139,862	c 32	N79-20297 *
US-PATENT-4,078,378	c 37	N78-24545 *	US-PATENT-4,107,363	c 33	N79-13364 *	US-PATENT-4,140,972	c 32	N79-20296 *
US-PATENT-4,079,268	c 32	N78-24391 *	US-PATENT-4,107,627	c 72	N79-12331 *	US-PATENT-4,141,219	c 34	N79-20335 *
US-PATENT-4,080,901	c 20	N78-24275 *	US-PATENT-4,107,919	c 34	N79-13288 *	US-PATENT-4,141,224	c 34	N79-20336 *
US-PATENT-4,081,250	c 44	N78-31527 *	US-PATENT-4,108,241	c 34	N79-13289 *	US-PATENT-4,141,259	c 37	N79-20377 *
US-PATENT-4,082,001	c 35	N78-24515 *	US-PATENT-4,108,213	c 33	N79-13289 *	US-PATENT-4,142,101	c 74	N79-20857 *
US-PATENT-4,082,569	c 44	N78-25527 *	US-PATENT-4,108,644	c 52	N79-18580 *	US-PATENT-4,142,119	c 33	N79-20314 *
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US-PATENT-4,083,181	c 07	N78-25089 *	US-PATENT-4,110,703	c 36	N79-18307 *	US-PATENT-4,145,058	c 37	N79-22475 *
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US-PATENT-4,083,520	c 15	N78-25119 *	US-PATENT-4,111,041	c 35	N79-14345 *	US-PATENT-4,145,524	c 27	N79-22300 *
US-PATENT-4,083,765	c 35	N78-25391 *	US-PATENT-4,111,058	c 35	N79-14347 *	US-PATENT-4,145,933	c 39	N79-22537 *
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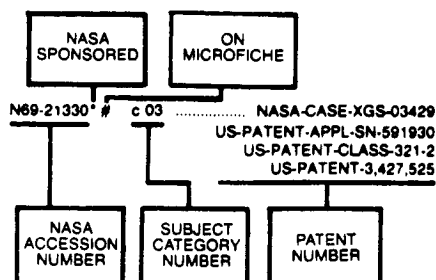
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US-PATENT-4,189,914	c 07	N81-29129 *	#	US-PATENT-4,222,098	c 33	N81-14220 *	#	US-PATENT-4,270,984	c 44	N81-29524 *	#
US-PATENT-4,190,060	c 52	N81-29763 *	#	US-PATENT-4,222,102	c 02	N81-14968 *	#	US-PATENT-4,271,761	c 15	N82-24272 *	#
US-PATENT-4,190,626	c 24	N81-29163 *	#	US-PATENT-4,225,372	c 27	N81-14077 *	#	US-PATENT-4,272,046	c 08	N82-24205 *	#
US-PATENT-4,191,159	c 37	N80-29703 *	#	US-PATENT-4,226,475	c 43	N81-26509 *	#	US-PATENT-4,272,302	c 33	N81-26360 *	#
US-PATENT-4,191,505	c 44	N80-21828 *	#	US-PATENT-4,227,096	c 33	N81-17348 *	#	US-PATENT-4,272,470	c 23	N81-29160 *	#
US-PATENT-4,191,893	c 44	N80-29834 *	#	US-PATENT-4,228,422	c 33	N81-14221 *	#	US-PATENT-4,272,720	c 47	N82-24779 *	#
US-PATENT-4,192,290	c 44	N80-20810 *	#	US-PATENT-4,228,656	c 37	N81-14318 *	#	US-PATENT-4,273,304	c 05	N81-26114 *	#
US-PATENT-4,192,910	c 33	N80-20487 *	#	US-PATENT-4,229,182	c 28	N81-15119 *	#	US-PATENT-4,273,918	c 54	N81-26718 *	#
US-PATENT-4,192,910	c 44	N81-29524 *	#	US-PATENT-4,229,196	c 28	N81-14103 *	#	US-PATENT-4,273,918	c 27	N82-24338 *	#
US-PATENT-4,192,994	c 74	N80-21140 *	#	US-PATENT-4,229,473	c 24	N81-14000 *	#	US-PATENT-4,274,038	c 37	N81-33483 *	#
US-PATENT-4,193,388	c 44	N80-20808 *	#	US-PATENT-4,229,473	c 24	N81-33235 *	#	US-PATENT-4,274,285	c 35	N81-29407 *	#
US-PATENT-4,193,435	c 37	N80-23653 *	#	US-PATENT-4,230,717	c 52	N81-14613 *	#	US-PATENT-4,274,901	c 24	N81-33235 *	#
US-PATENT-4,193,570	c 35	N80-21719 *	#	US-PATENT-4,233,258	c 27	N81-14078 *	#	US-PATENT-4,275,317	c 33	N82-24418 *	#
US-PATENT-4,193,693	c 35	N80-20563 *	#	US-PATENT-4,233,606	c 32	N81-14185 *	#	US-PATENT-4,275,453	c 33	N82-24417 *	#
US-PATENT-4,193,827	c 28	N80-20402 *	#	US-PATENT-4,234,258	c 25	N81-14015 *	#	US-PATENT-4,276,344	c 27	N81-27272 *	#
US-PATENT-4,193,827	c 25	N81-14103 *	#	US-PATENT-4,234,715	c 25	N81-14016 *	#	US-PATENT-4,276,344	c 27	N85-21347 *	#
US-PATENT-4,194,115	c 28	N80-20334 *	#	US-PATENT-4,234,971	c 32	N81-14186 *	#	US-PATENT-4,276,403	c 27	N81-27271 *	#
US-PATENT-4,195,244	c 35	N80-20559 *	#	US-PATENT-4,235,060	c 37	N81-14317 *	#	US-PATENT-4,276,553	c 32	N81-27341 *	#
US-PATENT-4,195,279	c 35	N80-20560 *	#	US-PATENT-4,236,383	c 44	N81-17518 *	#	US-PATENT-4,276,588	c 33	N81-33404 *	#
US-PATENT-4,195,512	c 43	N80-23711 *	#	US-PATENT-4,236,684	c 08	N81-19130 *	#	US-PATENT-4,277,402	c 23	N82-16174 *	#
US-PATENT-4,195,666	c 37	N80-23654 *	#	US-PATENT-4,237,662	c 31	N81-27323 *	#	US-PATENT-4,277,721	c 33	N82-24415 *	#
US-PATENT-4,196,129	c 27	N80-32515 *	#	US-PATENT-4,238,911	c 31	N81-27324 *	#	US-PATENT-4,278,220	c 07	N82-26293 *	#
US-PATENT-4,196,619	c 46	N80-24906 *	#	US-PATENT-4,239,057	c 37	N81-17433 *	#	US-PATENT-4,278,351	c 74	N81-29963 *	#
US-PATENT-4,196,840	c 37	N80-23655 *	#	US-PATENT-4,240,256	c 37	N81-17432 *	#	US-PATENT-4,278,830	c 44	N81-29525 *	#
US-PATENT-4,197,530	c 33	N80-23559 *	#	US-PATENT-4,240,290	c 06	N81-17057 *	#	US-PATENT-4,278,830	c 44	N82-28780 *	#
US-PATENT-4,198,209	c 28	N80-23471 *	#	US-PATENT-4,240,601	c 43	N81-17499 *	#	US-PATENT-4,278,978	c 32	N81-29308 *	#
US-PATENT-4,198,232	c 26	N80-23419 *	#	US-PATENT-4,241,308	c 33	N81-17349 *	#	US-PATENT-4,279,018	c 33	N81-33405 *	#
US-PATENT-4,198,788	c 74	N80-24149 *	#	US-PATENT-4,241,312	c 35	N81-19427 *	#	US-PATENT-4,279,001	c 33	N82-24416 *	#
US-PATENT-4,198,792	c 25	N80-23383 *	#	US-PATENT-4,242,498	c 27	N81-17259 *	#	US-PATENT-4,279,632	c 31	N81-33319 *	#
US-PATENT-4,198,988	c 52	N80-23969 *	#	US-PATENT-4,242,553	c 33	N81-19389 *	#	US-PATENT-4,279,906	c 52	N81-29764 *	#
US-PATENT-4,199,448	c 27	N80-23452 *	#	US-PATENT-4,242,864	c 07	N81-19116 *	#	US-PATENT-4,280,141	c 33	N81-33403 *	#
US-PATENT-4,199,650	c 27	N80-24437 *	#	US-PATENT-4,243,323	c 74	N81-17888 *	#	US-PATENT-4,280,689	c 37	N81-33482 *	#
US-PATENT-4,199,764	c 32	N80-23524 *	#	US-PATENT-4,243,327	c 74	N81-17887 *	#	US-PATENT-4,280,766	c 35	N81-33448 *	#
US-PATENT-4,199,937	c 34	N80-24573 *	#	US-PATENT-4,244,215	c 04	N81-21047 *	#	US-PATENT-4,281,102	c 27	N81-29229 *	#
US-PATENT-4,199,937	c 44	N81-24519 *	#	US-PATENT-4,244,810	c 09	N82-29330 *	#	US-PATENT-4,281,384	c 18	N81-29152 *	#
US-PATENT-4,200,721	c 27	N80-24438 *	#	US-PATENT-4,244,853	c 27	N81-19296 *	#	US-PATENT-4,281,708	c 33	N82-24419 *	#
US-PATENT-4,201,468	c 32	N80-24510 *	#	US-PATENT-4,244,857	c 27	N81-17260 *	#	US-PATENT-4,282,479	c 33	N82-24420 *	#
US-PATENT-4,203,723	c 27	N80-26446 *	#	US-PATENT-4,245,085	c 27	N81-17262 *	#	US-PATENT-4,282,525	c 46	N82-12685 *	#
US-PATENT-4,204,037	c 51	N80-27067 *	#	US-PATENT-4,245,286	c 33	N81-19392 *	#	US-PATENT-4,282,752	c 44	N82-16474 *	#
US-PATENT-4,204,154	c 33	N80-26599 *	#	US-PATENT-4,245,289	c 33	N81-19393 *	#	US-PATENT-4,283,705	c 06	N82-16075 *	#
US-PATENT-4,204,402	c 07	N80-26298 *	#	US-PATENT-4,245,566	c 44	N81-24519 *	#	US-PATENT-4,283,995	c 37	N81-32510 *	#
US-PATENT-4,204,544	c 52	N80-27072 *	#	US-PATENT-4,245,768	c 31	N81-19343 *	#	US-PATENT-4,284,034	c 51	N81-32829 *	#
US-PATENT-4,204,899	c 24	N80-26388 *	#	US-PATENT-4,245,956	c 37	N81-19455 *	#	US-PATENT-4,284,461	c 27	N82-11206 *	#
US-PATENT-4,205,229	c 35	N80-26635 *	#	US-PATENT-4,246,001	c 05	N81-19087 *	#	US-PATENT-4,284,682	c 27	N82-16238 *	#
US-PATENT-4,206,383	c 72	N80-27163 *	#	US-PATENT-4,246,901	c 27	N81-17261 *	#	US-PATENT-4,286,209	c 35	N82-11431 *	#
US-PATENT-4,206,713	c 31	N81-15154 *	#	US-PATENT-4,247,434	c 52	N81-24711 *	#	US-PATENT-4,286,460	c 09	N82-11088 *	#
US-PATENT-4,206,970	c 74	N80-27185 *	#	US-PATENT-4,248,083	c 25	N81-19426 *	#	US-PATENT-4,286,542	c 37	N82-12441 *	#
US-PATENT-4,207,024	c 37	N80-26658 *	#	US-PATENT-4,249,116	c 35	N81-20352 *	#	US-PATENT-4,287,152	c 35	N82-11432 *	#
US-PATENT-4,207,024	c 37	N82-19540 *	#	US-PATENT-4,249,238	c 03	N81-19115 *	#	US-PATENT-4,287,518	c 32	N82-11336 *	#
US-PATENT-4,2											

US-PATENT-4,292,375	c 24	N82-24296 *	#	US-PATENT-4,341,918	c 44	N82-31764 *	#	US-PATENT-4,388,502	c 05	N83-27975 *	#
US-PATENT-4,292,634	c 32	N82-12297 *	#	US-PATENT-4,341,925	c 32	N82-31583 *	#	US-PATENT-4,388,542	c 44	N83-28573 *	#
US-PATENT-4,293,522	c 25	N82-12166 *	#	US-PATENT-4,343,287	c 37	N82-32370 *	#	US-PATENT-4,388,585	c 33	N83-28319 *	#
US-PATENT-4,294,261	c 52	N82-11770 *	#	US-PATENT-4,343,447	c 08	N82-32373 *	#	US-PATENT-4,388,585	c 33	N84-33660 *	#
US-PATENT-4,294,264	c 52	N82-22875 *	#	US-PATENT-4,343,506	c 85	N82-33288 *	#	US-PATENT-4,388,965	c 34	N83-28356 *	#
US-PATENT-4,295,111	c 33	N82-11357 *	#	US-PATENT-4,343,584	c 37	N82-32731 *	#	US-PATENT-4,389,504	c 27	N83-28240 *	#
US-PATENT-4,295,140	c 35	N82-15381 *	#	US-PATENT-4,343,772	c 44	N83-10501 *	#	US-PATENT-4,389,504	c 27	N85-21349 *	#
US-PATENT-4,295,786	c 37	N82-19540 *	#	US-PATENT-4,344,591	c 24	N82-32417 *	#	US-PATENT-4,389,849	c 44	N83-28574 *	#
US-PATENT-4,298,833	c 33	N82-18493 *	#	US-PATENT-4,344,787	c 31	N83-31896 *	#	US-PATENT-4,389,904	c 35	N83-29650 *	#
US-PATENT-4,298,926	c 33	N82-18494 *	#	US-PATENT-4,344,996	c 27	N82-33521 *	#	US-PATENT-4,391,129	c 34	N83-31993 *	#
US-PATENT-4,298,987	c 60	N82-16747 *	#	US-PATENT-4,345,153	c 35	N82-32659 *	#	US-PATENT-4,391,423	c 18	N83-29303 *	#
US-PATENT-4,299,492	c 36	N82-16396 *	#	US-PATENT-4,346,595	c 06	N83-10040 *	#	US-PATENT-4,391,514	c 36	N83-34304 *	#
US-PATENT-4,300,106	c 36	N82-13415 *	#	US-PATENT-4,346,595	c 06	N84-34443 *	#	US-PATENT-4,391,514	c 36	N83-29680 *	#
US-PATENT-4,300,159	c 43	N82-13465 *	#	US-PATENT-4,346,715	c 52	N82-33996 *	#	US-PATENT-4,391,609	c 25	N83-31743 *	#
US-PATENT-4,300,656	c 71	N82-16800 *	#	US-PATENT-4,346,754	c 34	N83-34221 *	#	US-PATENT-4,392,356	c 34	N83-29625 *	#
US-PATENT-4,300,723	c 34	N82-13376 *	#	US-PATENT-4,346,990	c 36	N82-32712 *	#	US-PATENT-4,392,749	c 35	N83-29651 *	#
US-PATENT-4,301,740	c 37	N82-21587 *	#	US-PATENT-4,347,613	c 36	N83-10417 *	#	US-PATENT-4,392,874	c 35	N83-29652 *	#
US-PATENT-4,302,223	c 25	N82-21269 *	#	US-PATENT-4,349,424	c 20	N83-10117 *	#	US-PATENT-4,392,920	c 27	N83-29388 *	#
US-PATENT-4,302,734	c 33	N82-16340 *	#	US-PATENT-4,349,424	c 70	N84-28565 *	#	US-PATENT-4,393,039	c 25	N83-29324 *	#
US-PATENT-4,303,961	c 28	N82-18401 *	#	US-PATENT-4,349,429	c 25	N83-10126 *	#	US-PATENT-4,393,706	c 71	N83-32516 *	#
US-PATENT-4,304,219	c 44	N82-18686 *	#	US-PATENT-4,349,954	c 26	N83-10170 *	#	US-PATENT-4,393,708	c 71	N83-32515 *	#
US-PATENT-4,304,320	c 37	N82-18601 *	#	US-PATENT-4,350,410	c 74	N83-10900 *	#	US-PATENT-4,393,716	c 39	N83-32081 *	#
US-PATENT-4,305,205	c 37	N82-26672 *	#	US-PATENT-4,350,574	c 44	N83-10494 *	#	US-PATENT-4,393,777	c 37	N84-12491 *	#
US-PATENT-4,307,024	c 25	N82-24312 *	#	US-PATENT-4,351,022	c 33	N83-10345 *	#	US-PATENT-4,394,610	c 33	N83-31953 *	#
US-PATENT-4,307,510	c 60	N82-24839 *	#	US-PATENT-4,355,311	c 32	N83-31918 *	#	US-PATENT-4,394,726	c 60	N83-32342 *	#
US-PATENT-4,307,575	c 44	N82-26776 *	#	US-PATENT-4,355,870	c 74	N83-13978 *	#	US-PATENT-4,394,819	c 35	N83-32026 *	#
US-PATENT-4,307,856	c 05	N82-26277 *	#	US-PATENT-4,355,896	c 47	N83-32232 *	#	US-PATENT-4,395,123	c 74	N83-32577 *	#
US-PATENT-4,308,309	c 27	N82-24339 *	#	US-PATENT-4,357,402	c 25	N83-13188 *	#	US-PATENT-4,395,503	c 27	N83-34043 *	#
US-PATENT-4,308,868	c 52	N82-29863 *	#	US-PATENT-4,358,358	c 25	N83-13187 *	#	US-PATENT-4,395,511	c 27	N84-14324 *	#
US-PATENT-4,309,039	c 37	N82-24490 *	#	US-PATENT-4,358,480	c 24	N83-13172 *	#	US-PATENT-4,395,540	c 27	N84-22746 *	#
US-PATENT-4,309,146	c 44	N82-24639 *	#	US-PATENT-4,358,486	c 24	N83-13171 *	#	US-PATENT-4,395,540	c 27	N85-20123 *	#
US-PATENT-4,309,372	c 25	N82-21268 *	#	US-PATENT-4,358,732	c 33	N83-18996 *	#	US-PATENT-4,395,557	c 27	N83-31854 *	#
US-PATENT-4,310,049	c 25	N82-23282 *	#	US-PATENT-4,358,846	c 32	N83-13323 *	#	US-PATENT-4,395,557	c 27	N84-22745 *	#
US-PATENT-4,310,132	c 24	N82-26384 *	#	US-PATENT-4,360,325	c 44	N83-14693 *	#	US-PATENT-4,395,557	c 27	N85-21347 *	#
US-PATENT-4,310,574	c 27	N82-28441 *	#	US-PATENT-4,360,701	c 44	N83-14692 *	#	US-PATENT-4,395,656	c 33	N83-31952 *	#
US-PATENT-4,310,906	c 33	N82-26572 *	#	US-PATENT-4,362,361	c 74	N83-17305 *	#	US-PATENT-4,396,918	c 04	N84-27713 *	#
US-PATENT-4,311,055	c 54	N82-26987 *	#	US-PATENT-4,362,769	c 27	N83-34039 *	#	US-PATENT-4,397,716	c 44	N83-34449 *	#
US-PATENT-4,311,057	c 37	N82-24493 *	#	US-PATENT-4,363,188	c 51	N83-17045 *	#	US-PATENT-4,398,021	c 27	N83-34041 *	#
US-PATENT-4,311,378	c 35	N82-26628 *	#	US-PATENT-4,363,237	c 71	N83-17235 *	#	US-PATENT-4,398,021	c 27	N85-20124 *	#
US-PATENT-4,311,615	c 25	N82-26396 *	#	US-PATENT-4,363,242	c 33	N83-16626 *	#	US-PATENT-4,398,129	c 33	N83-34189 *	#
US-PATENT-4,311,870	c 44	N82-26777 *	#	US-PATENT-4,366,680	c 31	N83-18197 *	#	US-PATENT-4,398,412	c 35	N84-28018 *	#
US-PATENT-4,312,292	c 37	N82-24492 *	#	US-PATENT-4,370,750	c 34	N83-19015 *	#	US-PATENT-4,398,667	c 71	N84-14873 *	#
US-PATENT-4,313,077	c 33	N82-26569 *	#	US-PATENT-4,371,301	c 37	N83-19091 *	#	US-PATENT-4,398,925	c 71	N83-35781 *	#
US-PATENT-4,313,103	c 33	N82-26570 *	#	US-PATENT-4,371,596	c 44	N83-32176 *	#	US-PATENT-4,399,415	c 36	N83-35350 *	#
US-PATENT-4,313,291	c 09	N82-29330 *	#	US-PATENT-4,371,873	c 32	N83-19988 *	#	US-PATENT-4,399,515	c 35	N84-14491 *	#
US-PATENT-4,313,726	c 09	N82-24212 *	#	US-PATENT-4,371,946	c 32	N83-18975 *	#	US-PATENT-4,400,191	c 31	N83-35176 *	#
US-PATENT-4,313,745	c 27	N82-28442 *	#	US-PATENT-4,372,110	c 07	N83-33884 *	#	US-PATENT-4,400,642	c 76	N83-34796 *	#
US-PATENT-4,313,777	c 33	N82-26571 *	#	US-PATENT-4,372,158	c 44	N83-21503 *	#	US-PATENT-4,400,657	c 33	N83-34190 *	#
US-PATENT-4,314,984	c 25	N82-28368 *	#	US-PATENT-4,372,159	c 44	N83-21504 *	#	US-PATENT-4,401,505	c 76	N83-35888 *	#
US-PATENT-4,315,194	c 33	N82-26568 *	#	US-PATENT-4,372,377	c 74	N83-19596 *	#	US-PATENT-4,401,934	c 33	N83-35227 *	#
US-PATENT-4,315,197	c 33	N82-24421 *	#	US-PATENT-4,372,680	c 35	N83-21311 *	#	US-PATENT-4,401,953	c 33	N83-34191 *	#
US-PATENT-4,315,266	c 32	N82-27558 *	#	US-PATENT-4,373,003	c 27	N83-18908 *	#	US-PATENT-4,402,221	c 71	N83-36846 *	#
US-PATENT-4,316,035	c 23	N82-28353 *	#	US-PATENT-4,373,039	c 27	N83-19900 *	#	US-PATENT-4,402,358	c 34	N83-35307 *	#
US-PATENT-4,317,102	c 35	N82-24470 *	#	US-PATENT-4,373,142	c 44	N83-32175 *	#	US-PATENT-4,402,447	c 35	N83-35338 *	#
US-PATENT-4,319,133	c 33	N82-28545 *	#	US-PATENT-4,373,989	c 76	N83-20789 *	#	US-PATENT-4,402,992	c 31	N83-35177 *	#
US-PATENT-4,320,290	c 74	N82-24072 *	#	US-PATENT-4,374,183	c 26	N83-31795 *	#	US-PATENT-4,404,469	c 74	N84-11920 *	#
US-PATENT-4,320,397	c 32	N82-23376 *	#	US-PATENT-4,374,378	c 35	N83-34272 *	#	US-PATENT-4,404,793	c 07	N83-36029 *	#
US-PATENT-4,320,911	c 37	N82-24494 *	#	US-PATENT-4,375,281	c 05	N83-19737 *	#	US-PATENT-4,405,184	c 37	N84-12492 *	#
US-PATENT-4,321,099	c 44	N82-28780 *	#	US-PATENT-4,375,396	c 31	N83-19947 *	#	US-PATENT-4,405,197	c 74	N84-11921 *	#
US-PATENT-4,321,572	c 33	N82-24422 *	#	US-PATENT-4,375,536	c 27	N83-34040 *	#	US-PATENT-4,406,256	c 37	N83-36483 *	#
US-PATENT-4,325,001	c 35	N82-24471 *	#	US-PATENT-4,375,674	c 39	N82-20280 *	#	US-PATENT-4,406,797	c 25	N83-36118 *	#
US-PATENT-4,325,707	c 25	N82-29371 *	#	US-PATENT-4,376,637	c 35	N84-17555 *	#	US-PATENT-4,406,989	c 33	N83-36356 *	#
US-PATENT-4,326,381	c 44	N82-24640 *	#	US-PATENT-4,376,872	c 44	N83-32177 *	#	US-PATENT-4,407,001	c 33	N83-36355 *	#
US-PATENT-4,326,685	c 04	N82-23231 *	#	US-PATENT-4,377,089	c 35	N83-21312 *	#	US-PATENT-4,407,165	c 37	N83-36482 *	#
US-PATENT-4,327,150	c 27	N82-24340 *	#	US-PATENT-4,377,169	c 52	N83-21785 *	#	US-PATENT-4,407,468	c 01	N83-35992 *	#
US-PATENT-4,327,437	c 60	N82-29013 *	#	US-PATENT-4,377,266	c 07	N83-20944 *	#	US-PATENT-4,407,563	c 74	N83-36898 *	#
US-PATENT-4,327,581	c 09	N82-23254 *	#	US-PATENT-4,377,341	c 74	N83-21949 *	#	US-PATENT-4,407,589	c 33	N83-36357 *	#
US-PATENT-4,328,464	c 36	N82-28616 *	#	US-PATENT-4,377,371	c 18	N83-20996 *	#	US-PATENT-4,407,686	c 35	N84-12443 *	#
US-PATENT-4,329,114	c 07	N82-32366 *	#	US-PATENT-4,377,371	c 37	N84-22957 *	#	US-PATENT-4,408,597	c 52	N84-11744 *	#
US-PATENT-4,329,385	c 27	N82-28440 *	#	US-PATENT-4,377,949	c 45	N83-25217 *	#	US-PATENT-4,408,658	c 27	N83-36220 *	#
US-PATENT-4,330,100	c 05	N82-28279 *	#	US-PATENT-4,378,209	c 35	N83-24828 *	#	US-PATENT-4,410,189	c 37	N84-11497 *	#
US-PATENT-4,330,359	c 76	N82-30105 *	#	US-PATENT-4,378,813	c 52	N82-25346 *	#	US-PATENT-4,410,682	c 24	N84-11213 *	#
US-PATENT-4,330,572	c 27	N82-33520 *	#	US-PATENT-4,379,970	c 33	N83-24763 *	#	US-PATENT-4,411,380	c 24	N84-11214 *	#
US-PATENT-4,331,422	c 52	N82-29862 *	#	US-PATENT-4,380,046	c 60	N83-25378 *	#	US-PATENT-4,411,597	c 07	N84-22560 *	#
US-PATENT-4,331,742	c 44	N82-29710 *	#	US-PATENT-4,381,174	c 37	N83-26078 *	#	US-PATENT-4,411,660	c 54	N84-11758 *	#
US-PATENT-4,331,746	c 44	N82-29708 *	#	US-PATENT-4,381,333	c 44	N83-34448 *	#	US-PATENT-4,412,664	c 02	N84-11136 *	#
US-PATENT-4,331,873	c 44	N82-32841 *	#	US-PATENT-4,381,375	c 37	N83-34323 *	#	US-PATENT-4,413,522	c 35	N84-12445 *	#
US-PATENT-4,331,956	c 33	N82-29538 *	#	US-PATENT-4,381,583	c 31	N83-31895 *	#	US-PATENT-4,413,784	c 34	N84-12406 *	#
US-PATENT-4,332,441	c 36	N82-29589 *	#	US-PATENT-4,381,881	c 74	N83-29032 *	#	US-PATENT-4,414,008	c 25	N84-12262 *	#
US-PATENT-4,335,190	c 27	N83-31855 *	#	US-PATENT-4,382,116	c 44	N83-27344 *	#	US-PATENT-4,414,509	c 35	N84-12444 *	#
US-PATENT-4,335,196	c 44	N83-13579 *	#	US-PATENT-4,382,224	c 33	N83-27126 *	#	US-PATENT-4,414,816	c 07	N84-24577 *	#
US-PATENT-4,335,206	c 35	N82-28604 *	#	US-PATENT-4,382,239	c 32	N83-27085 *	#	US-PATENT-4,415,133	c 05	N84-12154 *	#
US-PATENT-4,335,503	c 44	N82-29709 *	#	US-PATENT-4,383,171	c 35	N83-27184 *	#	US-PATENT-4,415,311	c 37	N84-12493 *	#
US-PATENT-4,336,117	c 26	N82-29415 *	#	US-PATENT-4,383,533	c 52	N83-27578 *	#	US-PATENT-4,415,450	c 45	N84-12654 *	#
US-PATENT-4,336,276	c 27	N82-29453 *	#	US-PATENT-4,383,785	c 31	N83-27058 *	#	US-PATENT-4,416,111	c 07	N84-33410 *	#
US-PATENT-4,336,616	c 33	N82-29539 *	#	US-PATENT-4,384,578	c 52	N83-27577 *	#	US-PATENT-4,416,266	c 52	N84-28388 *	#
US-PATENT-4,338,061	c 07	N83-31603 *	#	US-PATENT-4,384,823	c 34	N83-27144 *	#	US-PATENT-4,417,175	c 70	N84-28565 *	#
US-PATENT-4,3											

US-PATENT-4,420,977	c 71	N84-23233 *	#	US-PATENT-4,463,357	c 46	N85-21846 *	#	US-PATENT-4,514,178	c 35	N85-29212 *	#
US-PATENT-4,421,109	c 54	N84-16803 *	#	US-PATENT-4,463,465	c 03	N84-33394 *	#	US-PATENT-4,514,557	c 25	N85-28982 *	#
US-PATENT-4,421,371	c 33	N84-14423 *	#	US-PATENT-4,463,606	c 71	N85-22105 *	#	US-PATENT-4,515,207	c 34	N85-29180 *	#
US-PATENT-4,421,700	c 24	N84-16262 *	#	US-PATENT-4,464,710	c 33	N84-33663 *	#	US-PATENT-4,515,751	c 35	N85-29213 *	#
US-PATENT-4,421,820	c 27	N84-14322 *	#	US-PATENT-4,466,242	c 20	N85-21256 *	#	US-PATENT-4,516,071	c 33	N85-30187 *	#
US-PATENT-4,422,012	c 33	N84-16452 *	#	US-PATENT-4,466,667	c 35	N84-33768 *	#	US-PATENT-4,516,435	c 37	N85-29286 *	#
US-PATENT-4,422,609	c 37	N84-16560 *	#	US-PATENT-4,469,552	c 76	N84-35113 *	#	US-PATENT-4,517,472	c 33	N85-29147 *	#
US-PATENT-4,423,605	c 34	N84-22903 *	#	US-PATENT-4,469,942	c 35	N84-33767 *	#	US-PATENT-4,517,505	c 37	N85-30333 *	#
US-PATENT-4,424,592	c 36	N84-16542 *	#	US-PATENT-4,469,998	c 33	N84-33661 *	#	US-PATENT-4,517,530	c 33	N85-29143 *	#
US-PATENT-4,425,376	c 71	N84-16940 *	#	US-PATENT-4,470,293	c 37	N84-33807 *	#	US-PATENT-4,518,277	c 37	N85-30336 *	#
US-PATENT-4,425,543	c 33	N84-16454 *	#	US-PATENT-4,470,403	c 44	N84-34792 *	#	US-PATENT-4,518,625	c 24	N85-30027 *	#
US-PATENT-4,425,785	c 15	N84-16231 *	#	US-PATENT-4,471,357	c 32	N84-34651 *	#	US-PATENT-4,518,722	c 27	N85-29044 *	#
US-PATENT-4,425,808	c 35	N84-28015 *	#	US-PATENT-4,472,473	c 18	N84-33450 *	#	US-PATENT-4,519,545	c 37	N85-29283 *	#
US-PATENT-4,425,808	c 35	N85-21598 *	#	US-PATENT-4,472,716	c 35	N84-33769 *	#	US-PATENT-4,520,601	c 37	N85-30335 *	#
US-PATENT-4,425,854	c 25	N84-16276 *	#	US-PATENT-4,472,728	c 35	N84-33765 *	#	US-PATENT-4,520,656	c 71	N85-29693 *	#
US-PATENT-4,426,614	c 33	N84-16455 *	#	US-PATENT-4,473,259	c 37	N85-20337 *	#	US-PATENT-4,521,077	c 74	N85-29750 *	#
US-PATENT-4,426,678	c 33	N84-16453 *	#	US-PATENT-4,473,674	c 24	N84-34571 *	#	US-PATENT-4,521,659	c 31	N85-29083 *	#
US-PATENT-4,426,874	c 35	N84-28019 *	#	US-PATENT-4,473,792	c 33	N84-33660 *	#	US-PATENT-4,521,688	c 35	N85-30281 *	#
US-PATENT-4,428,122	c 35	N84-16523 *	#	US-PATENT-4,474,062	c 06	N84-34443 *	#	US-PATENT-4,521,702	c 33	N85-29145 *	#
US-PATENT-4,428,226	c 07	N84-22559 *	#	US-PATENT-4,474,180	c 52	N84-34913 *	#	US-PATENT-4,521,854	c 33	N85-29142 *	#
US-PATENT-4,428,675	c 35	N84-22929 *	#	US-PATENT-4,474,471	c 35	N84-34705 *	#	US-PATENT-4,522,469	c 76	N85-33826 *	#
US-PATENT-4,428,703	c 37	N84-16561 *	#	US-PATENT-4,474,975	c 25	N85-21280 *	#	US-PATENT-4,522,661	c 76	N85-30922 *	#
US-PATENT-4,429,537	c 37	N84-22958 *	#	US-PATENT-4,475,063	c 33	N85-21491 *	#	US-PATENT-4,522,755	c 27	N86-19455 *	#
US-PATENT-4,430,360	c 37	N84-22957 *	#	US-PATENT-4,475,385	c 09	N84-34448 *	#	US-PATENT-4,522,844	c 26	N85-29005 *	#
US-PATENT-4,430,673	c 74	N84-23247 *	#	US-PATENT-4,475,527	c 37	N85-21650 *	#	US-PATENT-4,523,008	c 27	N85-29043 *	#
US-PATENT-4,431,306	c 35	N84-22931 *	#	US-PATENT-4,475,921	c 71	N85-22104 *	#	US-PATENT-4,523,682	c 71	N85-30765 *	#
US-PATENT-4,431,333	c 18	N84-22605 *	#	US-PATENT-4,478,879	c 44	N85-20530 *	#	US-PATENT-4,523,741	c 37	N85-29284 *	#
US-PATENT-4,431,761	c 27	N84-22747 *	#	US-PATENT-4,479,053	c 74	N85-22139 *	#	US-PATENT-4,523,810	c 74	N85-29749 *	#
US-PATENT-4,431,792	c 28	N84-22746 *	#	US-PATENT-4,479,386	c 27	N85-20126 *	#	US-PATENT-4,524,237	c 44	N85-30475 *	#
US-PATENT-4,432,853	c 52	N84-23095 *	#	US-PATENT-4,479,560	c 35	N85-20294 *	#	US-PATENT-4,526,925	c 27	N86-20560 *	#
US-PATENT-4,433,115	c 27	N84-22745 *	#	US-PATENT-4,481,570	c 60	N85-21992 *	#	US-PATENT-4,527,092	c 37	N85-33489 *	#
US-PATENT-4,433,276	c 33	N84-22885 *	#	US-PATENT-4,482,778	c 44	N85-21768 *	#	US-PATENT-4,527,910	c 37	N85-33490 *	#
US-PATENT-4,433,439	c 54	N84-23113 *	#	US-PATENT-4,483,512	c 33	N85-21492 *	#	US-PATENT-4,528,386	c 23	N85-33187 *	#
US-PATENT-4,433,544	c 44	N84-23018 *	#	US-PATENT-4,483,639	c 37	N85-20338 *	#	US-PATENT-4,528,417	c 44	N85-34441 *	#
US-PATENT-4,433,672	c 44	N84-28203 *	#	US-PATENT-4,483,817	c 25	N85-21279 *	#	US-PATENT-4,528,639	c 60	N85-33701 *	#
US-PATENT-4,434,106	c 27	N84-22744 *	#	US-PATENT-4,485,151	c 24	N85-21266 *	#	US-PATENT-4,529,358	c 34	N85-33433 *	#
US-PATENT-4,434,189	c 36	N84-22944 *	#	US-PATENT-4,485,151	c 24	N85-21266 *	#	US-PATENT-4,531,143	c 33	N86-19516 *	#
US-PATENT-4,434,490	c 36	N84-22943 *	#	US-PATENT-4,485,670	c 24	N85-35233 *	#	US-PATENT-4,531,797	c 35	N85-34373 *	#
US-PATENT-4,434,659	c 35	N84-22928 *	#	US-PATENT-4,485,671	c 34	N85-21568 *	#	US-PATENT-4,533,101	c 07	N85-35194 *	#
US-PATENT-4,435,642	c 35	N84-28016 *	#	US-PATENT-4,485,992	c 35	N85-20295 *	#	US-PATENT-4,533,242	c 74	N85-34629 *	#
US-PATENT-4,435,781	c 60	N84-28491 *	#	US-PATENT-4,488,155	c 08	N85-19985 *	#	US-PATENT-4,534,166	c 07	N85-35195 *	#
US-PATENT-4,437,069	c 33	N84-22887 *	#	US-PATENT-4,488,335	c 33	N85-21493 *	#	US-PATENT-4,535,033	c 24	N85-35233 *	#
US-PATENT-4,437,923	c 35	N84-22930 *	#	US-PATENT-4,488,663	c 27	N85-20125 *	#	US-PATENT-4,535,035	c 26	N85-35267 *	#
US-PATENT-4,437,961	c 33	N84-22884 *	#	US-PATENT-4,489,027	c 35	N85-21595 *	#	US-PATENT-4,535,636	c 35	N85-34375 *	#
US-PATENT-4,437,962	c 24	N84-22695 *	#	US-PATENT-4,489,239	c 27	N85-20124 *	#	US-PATENT-4,536,114	c 37	N85-34401 *	#
US-PATENT-4,437,962	c 24	N85-21267 *	#	US-PATENT-4,489,243	c 36	N85-21631 *	#	US-PATENT-4,536,565	c 27	N85-34280 *	#
US-PATENT-4,439,301	c 44	N84-23019 *	#	US-PATENT-4,489,264	c 44	N85-21769 *	#	US-PATENT-4,537,554	c 85	N85-34722 *	#
US-PATENT-4,439,465	c 26	N84-22734 *	#	US-PATENT-4,490,117	c 33	N85-22877 *	#	US-PATENT-4,537,834	c 27	N85-34821 *	#
US-PATENT-4,439,718	c 33	N84-22886 *	#	US-PATENT-4,490,229	c 09	N85-19990 *	#	US-PATENT-4,538,066	c 35	N85-34374 *	#
US-PATENT-4,439,766	c 32	N84-22820 *	#	US-PATENT-4,491,427	c 31	N85-20153 *	#	US-PATENT-4,538,446	c 34	N86-12547 *	#
US-PATENT-4,439,968	c 16	N84-22601 *	#	US-PATENT-4,493,021	c 37	N85-21651 *	#	US-PATENT-4,538,778	c 08	N85-35200 *	#
US-PATENT-4,442,716	c 35	N84-22934 *	#	US-PATENT-4,493,211	c 32	N85-21428 *	#	US-PATENT-4,539,293	c 23	N85-35227 *	#
US-PATENT-4,443,321	c 25	N84-22709 *	#	US-PATENT-4,493,553	c 09	N85-21178 *	#	US-PATENT-4,540,336	c 37	N85-34402 *	#
US-PATENT-4,443,701	c 74	N84-28590 *	#	US-PATENT-4,495,044	c 36	N85-21639 *	#	US-PATENT-4,540,986	c 04	N86-19304 *	#
US-PATENT-4,443,724	c 35	N84-28017 *	#	US-PATENT-4,495,339	c 24	N85-21267 *	#	US-PATENT-4,542,520	c 74	N86-20126 *	#
US-PATENT-4,444,368	c 05	N84-22551 *	#	US-PATENT-4,495,520	c 25	N85-30039 *	#	US-PATENT-4,542,858	c 33	N86-20669 *	#
US-PATENT-4,444,464	c 74	N84-23248 *	#	US-PATENT-4,496,122	c 32	N85-21427 *	#	US-PATENT-4,542,963	c 74	N86-20125 *	#
US-PATENT-4,444,972	c 27	N84-22750 *	#	US-PATENT-4,496,701	c 05	N85-21147 *	#	US-PATENT-4,543,295	c 27	N86-20561 *	#
US-PATENT-4,444,979	c 27	N84-22749 *	#	US-PATENT-4,497,540	c 27	N85-21347 *	#	US-PATENT-4,543,302	c 44	N86-19721 *	#
US-PATENT-4,445,118	c 04	N84-22546 *	#	US-PATENT-4,497,935	c 74	N85-23396 *	#	US-PATENT-4,544,025	c 76	N86-20150 *	#
US-PATENT-4,445,378	c 35	N84-22933 *	#	US-PATENT-4,497,939	c 27	N85-21349 *	#	US-PATENT-4,544,025	c 35	N86-20750 *	#
US-PATENT-4,446,199	c 26	N84-33555 *	#	US-PATENT-4,497,948	c 27	N85-21351 *	#	US-PATENT-4,544,068	c 35	N86-20751 *	#
US-PATENT-4,446,396	c 35	N84-22932 *	#	US-PATENT-4,498,231	c 27	N85-21352 *	#	US-PATENT-4,545,025	c 60	N86-21154 *	#
US-PATENT-4,446,459	c 60	N84-28492 *	#	US-PATENT-4,498,333	c 27	N85-21350 *	#	US-PATENT-4,545,553	c 33	N86-20671 *	#
US-PATENT-4,446,556	c 36	N84-28065 *	#	US-PATENT-4,499,260	c 35	N85-21598 *	#	US-PATENT-4,545,586	c 37	N86-20788 *	#
US-PATENT-4,446,757	c 37	N84-28084 *	#	US-PATENT-4,499,424	c 35	N85-21597 *	#	US-PATENT-4,545,723	c 37	N86-19603 *	#
US-PATENT-4,447,251	c 71	N84-28568 *	#	US-PATENT-4,499,470	c 27	N85-21348 *	#	US-PATENT-4,546,248	c 32	N86-20647 *	#
US-PATENT-4,447,943	c 52	N84-28389 *	#	US-PATENT-4,500,265	c 35	N85-21596 *	#	US-PATENT-4,547,121	c 37	N86-20789 *	#
US-PATENT-4,448,408	c 37	N84-28083 *	#	US-PATENT-4,500,492	c 43	N85-21723 *	#	US-PATENT-4,547,686	c 33	N86-20672 *	#
US-PATENT-4,449,370	c 37	N84-33808 *	#	US-PATENT-4,500,936	c 31	N85-21404 *	#	US-PATENT-4,548,083	c 39	N86-20841 *	#
US-PATENT-4,449,400	c 47	N84-28292 *	#	US-PATENT-4,503,436	c 37	N85-21652 *	#	US-PATENT-4,549,435	c 35	N86-20752 *	#
US-PATENT-4,449,514	c 44	N84-28204 *	#	US-PATENT-4,505,998	c 32	N85-29118 *	#	US-PATENT-4,550,129	c 24	N86-19380 *	#
US-PATENT-4,449,894	c 37	N84-28081 *	#	US-PATENT-4,506,183	c 33	N85-29144 *	#	US-PATENT-4,550,177	c 23	N86-19378 *	#
US-PATENT-4,450,268	c 27	N84-27884 *	#	US-PATENT-4,507,928	c 34	N85-29179 *	#	US-PATENT-4,550,292	c 33	N86-20668 *	#
US-PATENT-4,450,447	c 32	N84-27951 *	#	US-PATENT-4,508,296	c 31	N85-29082 *	#	US-PATENT-4,550,561	c 07	N86-20389 *	#
US-PATENT-4,451,017	c 18	N84-27787 *	#	US-PATENT-4,509,048	c 18	N85-29991 *	#	US-PATENT-4,551,677	c 35	N86-32698 *	#
US-PATENT-4,451,496	c 26	N84-27855 *	#	US-PATENT-4,509,132	c 32	N85-34327 *	#	US-PATENT-4,551,687	c 33	N86-20670 *	#
US-PATENT-4,452,088	c 24	N84-27829 *	#	US-PATENT-4,509,548	c 36	N85-29264 *	#	US-PATENT-4,551,724	c 43	N86-19711 *	#
US-PATENT-4,452,412	c 16	N84-27784 *	#	US-PATENT-4,510,277	c 33	N85-34333 *	#	US-PATENT-4,552,466	c 37	N86-19806 *	#
US-PATENT-4,453,163	c 06	N84-27733 *	#	US-PATENT-4,510,296	c 37	N85-34403 *	#	US-PATENT-4,552,784	c 26	N86-32550 *	#
US-PATENT-4,454,611	c 54	N84-28484 *	#	US-PATENT-4,511,362	c 27	N85-34282 *	#	US-PATENT-4,552,931	c 27	N86-19456 *	#
US-PATENT-4,454,649	c 44	N84-28205 *	#	US-PATENT-4,512,332	c 23	N85-28973 *	#	US-PATENT-4,553,110	c 33	N86-19515 *	#
US-PATENT-4,454,753	c 09	N84-27749 *	#	US-PATENT-4,512,678	c 33	N85-29146 *	#	US-PATENT-4,553,393	c 37	N86-19604 *	#
US-PATENT-4,455,418	c 27	N84-27885 *	#	US-PATENT-4,512,699	c 25	N85-35253 *	#	US-PATENT-4,553,917	c 26	N86-32551 *	#
US-PATENT-4,455,418	c 25	N85-28982 *	#	US-PATENT-4,512,848	c 76	N85-30923 *	#	US-PATENT-4,554,905	c 18	N86-20469 *	#
US-PATENT-4,455,532	c 72	N84-28575 *	#	US-PATENT-4,513,317	c 44	N85-30474 *	#	US-PATENT-4,556,327	c 35	N86-19580 *	#
US-PATENT-4,455,680	c 32	N84-27952 *	#	US-PATENT-4,513,423	c 35	N85-30282 *	#	US-PATENT-4,556,986	c 74	N86-21348 *	#
US-PATENT-4,4											

US-PATENT-4,564,787	..... c 33	N86-21742 * #
US-PATENT-4,565,557	..... c 31	N86-21718 * #
US-PATENT-4,565,886	..... c 27	N86-21675 * #
US-PATENT-4,566,447	..... c 54	N86-22112 * #
US-PATENT-4,567,301	..... c 23	N86-21582 * #
US-PATENT-4,567,348	..... c 37	N86-21850 * #
US-PATENT-4,568,733	..... c 24	N86-21590 * #
US-PATENT-4,572,004	..... c 35	N86-25752 * #
US-PATENT-4,578,678	..... c 04	N86-27270 * #
US-PATENT-4,578,920	..... c 37	N86-25789 * #
US-PATENT-4,579-782	..... c 24	N86-25416 * #
US-PATENT-4,579,302	..... c 18	N86-24729 * #
US-PATENT-4,579,475	..... c 37	N86-27630 * #
US-PATENT-4,580-791	..... c 37	N86-25790 * #
US-PATENT-4,582,277	..... c 16	N86-26352 * #
US-PATENT-4,582,590	..... c 25	N86-25428 * #
US-PATENT-4,583,587	..... c 34	N86-27593 * #
US-PATENT-4,583,860	..... c 74	N86-26190 * #
US-PATENT-4,584,249	..... c 44	N86-25874 * #
US-PATENT-4,584,510	..... c 08	N86-27288 * #
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N69-27504* #	c 15	NASA-CASE-XNP-09452 US-PATENT-APPL-SN-640789 US-PATENT-CLASS-267-1 US-PATENT-3,430,942	N69-39974* #	c 07	NASA-CASE-XGS-05918 US-PATENT-APPL-SN-685497 US-PATENT-CLASS-343-7.5 US-PATENT-3,430,237	N70-33254* #	c 14	NASA-CASE-XLA-00062 US-PATENT-APPL-SN-853983 US-PATENT-CLASS-88-16 US-PATENT-3,041,924
N69-27505* #	c 15	NASA-CASE-XLA-09122 US-PATENT-APPL-SN-619903 US-PATENT-CLASS-64-28 US-PATENT-3,430,460	N69-39975* #	c 14	NASA-CASE-XLA-01781 US-PATENT-APPL-SN-441936 US-PATENT-CLASS-73-86 US-PATENT-3,425,268	N70-33255* #	c 02	NASA-CASE-XLA-00230 US-PATENT-APPL-SN-41455 US-PATENT-CLASS-244-43 US-PATENT-3,053,484
N69-27871* #	c 15	NASA-CASE-XMS-04318 US-PATENT-APPL-SN-521996 US-PATENT-CLASS-219-347 US-PATENT-3,431,397	N69-39976* #	c 07	NASA-CASE-XGS-02749 US-PATENT-APPL-SN-502753 US-PATENT-CLASS-179-15 US-PATENT-3,450,842	N70-33264* #	c 15	NASA-CASE-XLE-00092 US-PATENT-APPL-SN-835146 US-PATENT-CLASS-253-39.15 US-PATENT-3,057,587
N69-31244* #	c 06	NASA-CASE-NPO-10714 US-PATENT-APPL-SN-817569 US-PATENT-CLASS-ERC-10187 US-PATENT-APPL-SN-825253	N69-39978* #	c 18	NASA-CASE-XGS-04119 US-PATENT-APPL-SN-452945 US-PATENT-CLASS-106-74 US-PATENT-3,454,410	N70-33265* #	c 28	NASA-CASE-XLE-00817 US-PATENT-APPL-SN-264735 US-PATENT-CLASS-60-35.3 US-PATENT-3,173,246
N69-31343* #	c 16	NASA-CASE-ERC-10120 US-PATENT-APPL-SN-827597 US-PATENT-CLASS-XMF-03873 US-PATENT-APPL-SN-543774	N69-39979* #	c 07	NASA-CASE-XGS-05211 US-PATENT-APPL-SN-590145 US-PATENT-CLASS-250-209 US-PATENT-3,444,380	N70-33266* #	c 02	NASA-CASE-XLA-00221 US-PATENT-APPL-SN-51473 US-PATENT-CLASS-244-46 US-PATENT-3,064,928
N69-33482* #	c 26	NASA-CASE-ERC-10120 US-PATENT-APPL-SN-827597 US-PATENT-CLASS-XMF-03873 US-PATENT-APPL-SN-543774	N69-39980* #	c 01	NASA-CASE-XLA-06095 US-PATENT-APPL-SN-683612 US-PATENT-CLASS-244-138 US-PATENT-3,443,779	N70-33267* #	c 25	NASA-CASE-XLA-00675 US-PATENT-APPL-SN-178213 US-PATENT-CLASS-315-111 US-PATENT-3,171,060
N69-39733* #	c 06	NASA-CASE-XMF-03873 US-PATENT-APPL-SN-543774 US-PATENT-CLASS-73-24 US-PATENT-3,429,177	N69-39981* #	c 14	NASA-CASE-XGS-01725 US-PATENT-APPL-SN-483691	N70-33278* #	c 11	NASA-CASE-XLE-00168 US-PATENT-APPL-SN-842170 US-PATENT-CLASS-73-116 US-PATENT-3,063,291
N69-39734* #	c 09	NASA-CASE-XMF-04238 US-PATENT-APPL-SN-562443						

N70-33279*	c 21	NASA-CASE-XFR-00181 US-PATENT-APPL-SN-28175 US-PATENT-CLASS-244-83 US-PATENT-3,028,126	N70-33386*	c 14	NASA-CASE-XLA-00113 US-PATENT-APPL-SN-2782 US-PATENT-CLASS-73-147 US-PATENT-3,001,395	N70-34559*	c 09	NASA-CASE-LAR-10218-1 US-PATENT-APPL-SN-47441
N70-33283*	c 17	NASA-CASE-XLE-00151 US-PATENT-APPL-SN-848481 US-PATENT-CLASS-75-171 US-PATENT-2,971,837	N70-34134*	c 03	NASA-CASE-XLE-00212 US-PATENT-APPL-SN-151598 US-PATENT-CLASS-310-4 US-PATENT-3,202,844	N70-34598*	c 09	NASA-CASE-XMF-00324 US-PATENT-APPL-SN-109789 US-PATENT-CLASS-339-176 US-PATENT-3,189,884
N70-33284*	c 28	NASA-CASE-XLE-00078 US-PATENT-APPL-SN-18776 US-PATENT-CLASS-60-35.6 US-PATENT-3,049,876	N70-34135*	c 31	NASA-CASE-XLA-00686 US-PATENT-APPL-SN-195347 US-PATENT-CLASS-343-833 US-PATENT-3,202,998	N70-34648*	c 03	NASA-CASE-NPO-11138 US-PATENT-APPL-SN-9251
N70-33285*	c 05	NASA-CASE-XLA-00118 US-PATENT-APPL-SN-840983 US-PATENT-CLASS-5-345 US-PATENT-3,038,175	N70-34156*	c 14	NASA-CASE-XLE-00266 US-PATENT-APPL-SN-202024 US-PATENT-CLASS-73-15 US-PATENT-3,204,447	N70-34661*	c 25	NASA-CASE-XLA-00147 US-PATENT-APPL-SN-178215 US-PATENT-CLASS-313-156 US-PATENT-3,201,835
N70-33286*	c 02	NASA-CASE-XLA-00142 US-PATENT-APPL-SN-28375 US-PATENT-CLASS-244-46 US-PATENT-3,028,122	N70-34157*	c 03	NASA-CASE-XMF-00517 US-PATENT-APPL-SN-216711 US-PATENT-CLASS-244-1 US-PATENT-3,204,889	N70-34664*	c 15	NASA-CASE-XMF-00515 US-PATENT-APPL-SN-278790 US-PATENT-CLASS-308-9 US-PATENT-3,199,931
N70-33287*	c 11	NASA-CASE-XLA-00112 US-PATENT-APPL-SN-843022 US-PATENT-CLASS-73-147 US-PATENT-3,005,339	N70-34158*	c 14	NASA-CASE-XGS-00359 US-PATENT-APPL-SN-84952 US-PATENT-CLASS-250-203 US-PATENT-3,205,361	N70-34675*	c 08	NASA-CASE-XNP-04182-1 US-PATENT-APPL-SN-872684
N70-33288*	c 17	NASA-CASE-XLE-02428 US-PATENT-APPL-SN-339821 US-PATENT-CLASS-29-188 US-PATENT-3,170,773	N70-34159*	c 31	NASA-CASE-XMF-03856 US-PATENT-APPL-SN-418941 US-PATENT-CLASS-248-188.9 US-PATENT-3,206,707	N70-34697*	c 14	NASA-CASE-NPO-11106 US-PATENT-APPL-SN-15020 US-PATENT-CLASS-307-88 US-PATENT-3,194,951
N70-33305*	c 12	NASA-CASE-XLA-00229 US-PATENT-APPL-SN-18780 US-PATENT-CLASS-114-68.5 US-PATENT-3,016,863	N70-34160*	c 02	NASA-CASE-XLA-01804 US-PATENT-APPL-SN-353637 US-PATENT-CLASS-244-50 US-PATENT-3,206,694	N70-34699*	c 15	NASA-CASE-NPO-10682 US-PATENT-APPL-SN-15023 US-PATENT-CLASS-307-88 US-PATENT-3,199,931
N70-33311*	c 15	NASA-CASE-XLE-00046 US-PATENT-APPL-SN-886786 US-PATENT-CLASS-29-488 US-PATENT-3,008,229	N70-34161*	c 14	NASA-CASE-XLA-00203 US-PATENT-APPL-SN-227882 US-PATENT-CLASS-73-105 US-PATENT-3,208,272	N70-34743*	c 08	NASA-CASE-XGS-00174 US-PATENT-APPL-SN-120803 US-PATENT-CLASS-307-88 US-PATENT-3,199,931
N70-33312*	c 09	NASA-CASE-XLA-00141 US-PATENT-APPL-SN-19971 US-PATENT-CLASS-219-34 US-PATENT-3,005,081	N70-34162*	c 28	NASA-CASE-XMF-01544 US-PATENT-APPL-SN-394636 US-PATENT-CLASS-60-35.5 US-PATENT-3,208,215	N70-34778*	c 08	NASA-CASE-XLA-00471 US-PATENT-APPL-SN-197553 US-PATENT-CLASS-235-154 US-PATENT-3,194,951
N70-33322*	c 14	NASA-CASE-XLA-00135 US-PATENT-APPL-SN-881152 US-PATENT-CLASS-244-14 US-PATENT-3,004,735	N70-34175*	c 28	NASA-CASE-XLE-01783 US-PATENT-APPL-SN-313132 US-PATENT-CLASS-60-35.5 US-PATENT-3,210,927	N70-34783*	c 27	NASA-CASE-XLA-00304 US-PATENT-APPL-SN-54552 US-PATENT-CLASS-18-39 US-PATENT-3,193,883
N70-33323*	c 15	NASA-CASE-XMF-00341 US-PATENT-APPL-SN-77256 US-PATENT-CLASS-62-45 US-PATENT-3,012,407	N70-34176*	c 31	NASA-CASE-XMF-00389 US-PATENT-APPL-SN-151114 US-PATENT-CLASS-244-1 US-PATENT-3,202,381	N70-34786*	c 11	NASA-CASE-XLA-00483 US-PATENT-APPL-SN-202029 US-PATENT-CLASS-73-432 US-PATENT-3,196,690
N70-33329*	c 11	NASA-CASE-XLA-00119 US-PATENT-APPL-SN-842171 US-PATENT-CLASS-240-1.2 US-PATENT-2,984,735	N70-34178*	c 02	NASA-CASE-XLA-00166 US-PATENT-APPL-SN-84961 US-PATENT-CLASS-244-46 US-PATENT-3,087,692	N70-34787*	c 08	NASA-CASE-XGS-00689 US-PATENT-APPL-SN-250451 US-PATENT-CLASS-235-176 US-PATENT-3,196,261
N70-33330*	c 15	NASA-CASE-XLE-00023 US-PATENT-APPL-SN-512352 US-PATENT-CLASS-78-1 US-PATENT-2,991,671	N70-34247*	c 15	NASA-CASE-XLE-00288 US-PATENT-APPL-SN-118200 US-PATENT-CLASS-62-50 US-PATENT-3,068,658	N70-34788*	c 28	NASA-CASE-XLE-00388 US-PATENT-APPL-SN-234568 US-PATENT-CLASS-55-306 US-PATENT-3,196,598
N70-33331*	c 28	NASA-CASE-XLA-00105 US-PATENT-APPL-SN-719173 US-PATENT-CLASS-60-35.6 US-PATENT-3,001,363	N70-34249*	c 15	NASA-CASE-XMF-00375 US-PATENT-APPL-SN-168696 US-PATENT-CLASS-72-56 US-PATENT-3,188,844	N70-34794*	c 14	NASA-CASE-XMF-00479 US-PATENT-APPL-SN-169977 US-PATENT-CLASS-73-71.2 US-PATENT-3,194,080
N70-33332*	c 02	NASA-CASE-XLA-00087 US-PATENT-APPL-SN-811509 US-PATENT-CLASS-244-12 US-PATENT-2,991,961	N70-34294*	c 28	NASA-CASE-XLE-00208 US-PATENT-APPL-SN-106135 US-PATENT-CLASS-60-35.54 US-PATENT-3,132,476	N70-34799*	c 14	NASA-CASE-XLA-00492 US-PATENT-APPL-SN-284265 US-PATENT-CLASS-73-88.5 US-PATENT-3,199,340
N70-33343*	c 03	NASA-CASE-XLA-00115 US-PATENT-APPL-SN-847027 US-PATENT-CLASS-244-1 US-PATENT-3,001,739	N70-34295*	c 21	NASA-CASE-XLA-01989 US-PATENT-APPL-SN-305020 US-PATENT-CLASS-244-1 US-PATENT-3,189,299	N70-34812*	c 33	NASA-CASE-XLE-00387 US-PATENT-APPL-SN-203411 US-PATENT-CLASS-219-19 US-PATENT-3,108,171
N70-33344*	c 33	NASA-CASE-XMS-00486 US-PATENT-APPL-SN-300113 US-PATENT-CLASS-244-1 US-PATENT-3,130,940	N70-34296*	c 31	NASA-CASE-XLA-00678 US-PATENT-APPL-SN-197551 US-PATENT-CLASS-244-1 US-PATENT-3,189,725	N70-34813*	c 14	NASA-CASE-XAC-00073 US-PATENT-APPL-SN-47122 US-PATENT-CLASS-73-147 US-PATENT-3,100,990
N70-33356*	c 28	NASA-CASE-XLE-00267 US-PATENT-APPL-SN-58147 US-PATENT-CLASS-60-35.5 US-PATENT-3,016,693	N70-34297*	c 21	NASA-CASE-XGS-00466 US-PATENT-APPL-SN-123597 US-PATENT-CLASS-250-83.3 US-PATENT-3,188,472	N70-34814*	c 15	NASA-CASE-XMF-00392 US-PATENT-APPL-SN-151112 US-PATENT-CLASS-219-137 US-PATENT-3,102,948
N70-33372*	c 28	NASA-CASE-XLE-00037 US-PATENT-APPL-SN-639589 US-PATENT-CLASS-253-39.15 US-PATENT-2,974,925	N70-34298*	c 14	NASA-CASE-XMF-00462 US-PATENT-APPL-SN-148001 US-PATENT-CLASS-88-14 US-PATENT-3,185,023	N70-34815*	c 11	NASA-CASE-XAC-00399 US-PATENT-APPL-SN-134481 US-PATENT-CLASS-35-12 US-PATENT-3,196,557
N70-33374*	c 28	NASA-CASE-XLA-00154 US-PATENT-APPL-SN-31242 US-PATENT-CLASS-60-35.6 US-PATENT-3,012,400	N70-34502*	c 09	NASA-CASE-XMF-00421 US-PATENT-APPL-SN-197548 US-PATENT-CLASS-317-140 US-PATENT-3,189,794	N70-34816*	c 14	NASA-CASE-XAC-00042 US-PATENT-APPL-SN-734805 US-PATENT-CLASS-73-398 US-PATENT-3,022,672
N70-33375*	c 28	NASA-CASE-XLE-00207 US-PATENT-APPL-SN-180370 US-PATENT-CLASS-60-35.6 US-PATENT-3,173,251	N70-34539*	c 21	NASA-CASE-XMF-00185 US-PATENT-APPL-SN-97112 US-PATENT-CLASS-244-76 US-PATENT-3,070,330	N70-34817*	c 15	NASA-CASE-XAC-00074 US-PATENT-APPL-SN-47123 US-PATENT-CLASS-137-340 US-PATENT-3,158,172
N70-33376*	c 15	NASA-CASE-XLE-00101 US-PATENT-APPL-SN-551961 US-PATENT-CLASS-251-173 US-PATENT-2,945,667	N70-34540*	c 33	NASA-CASE-XLA-00330 US-PATENT-APPL-SN-264729 US-PATENT-CLASS-219-121 US-PATENT-3,201,560	N70-34818*	c 14	NASA-CASE-XLE-00503 US-PATENT-APPL-SN-261812 US-PATENT-CLASS-73-136 US-PATENT-3,196,675
N70-33382*	c 15	NASA-CASE-XLE-00010 US-PATENT-APPL-SN-554899 US-PATENT-CLASS-266-19 US-PATENT-2,934,331	N70-34545*	c 33	NASA-CASE-XLE-00490 US-PATENT-APPL-SN-252259 US-PATENT-CLASS-219-347 US-PATENT-3,189,726	N70-34819*	c 09	NASA-CASE-XGS-00381 US-PATENT-APPL-SN-104188 US-PATENT-CLASS-307-88.5 US-PATENT-3,085,165
						N70-34820*	c 14	NASA-CASE-XAC-00030 US-PATENT-APPL-SN-760819

N70-34844* #	c 11	US-PATENT-CLASS-73-401	US-PATENT-CLASS-310-5	N70-35409* #	c 15	US-PATENT-CLASS-310-5	N70-36802* #	c 28	US-PATENT-CLASS-310-5	N70-36803* #	c 03	US-PATENT-CLASS-310-5	N70-36804* #	c 02	US-PATENT-CLASS-310-5	N70-36805* #	c 26	US-PATENT-CLASS-310-5	N70-36806* #	c 28	US-PATENT-CLASS-310-5	N70-36807* #	c 14	US-PATENT-CLASS-310-5	N70-36824* #	c 14	US-PATENT-CLASS-310-5	N70-36825* #	c 02	US-PATENT-CLASS-310-5	N70-36845* #	c 31	US-PATENT-CLASS-310-5	N70-36846* #	c 33	US-PATENT-CLASS-310-5	N70-36847* #	c 33	US-PATENT-CLASS-310-5	N70-36901* #	c 15	US-PATENT-CLASS-310-5	N70-36907* #	c 14	US-PATENT-CLASS-310-5	N70-36908* #	c 15	US-PATENT-CLASS-310-5	N70-36910* #	c 28	US-PATENT-CLASS-310-5	N70-36911* #	c 07	US-PATENT-CLASS-310-5	N70-36913* #	c 11	US-PATENT-CLASS-310-5	N70-36938* #	c 21	US-PATENT-CLASS-310-5	N70-36943* #	c 21	US-PATENT-CLASS-310-5	N70-36946* #	c 25	US-PATENT-CLASS-310-5	N70-37245* #	c 28	US-PATENT-CLASS-310-5	N70-37924* #	c 31	US-PATENT-CLASS-310-5	N70-37925* #	c 15	US-PATENT-CLASS-310-5	N70-35408* #	c 03	US-PATENT-CLASS-310-5	N70-35409* #	c 15	US-PATENT-CLASS-310-5	N70-35422* #	c 28	US-PATENT-CLASS-310-5	N70-35423* #	c 08	US-PATENT-CLASS-310-5	N70-35425* #	c 09	US-PATENT-CLASS-310-5	N70-35427* #	c 21	US-PATENT-CLASS-310-5	N70-35440* #	c 09	US-PATENT-CLASS-310-5	N70-35534* #	c 27	US-PATENT-CLASS-310-5	N70-35587* #	c 14	US-PATENT-CLASS-310-5	N70-35666* #	c 14	US-PATENT-CLASS-310-5	N70-35679* #	c 15	US-PATENT-CLASS-310-5	N70-36400* #	c 18	US-PATENT-CLASS-310-5	N70-36409* #	c 15	US-PATENT-CLASS-310-5	N70-36410* #	c 31	US-PATENT-CLASS-310-5	N70-36411* #	c 15	US-PATENT-CLASS-310-5	N70-36412* #	c 15	US-PATENT-CLASS-310-5	N70-36492* #	c 15	US-PATENT-CLASS-310-5	N70-36493* #	c 05	US-PATENT-CLASS-310-5	N70-36494* #	c 09	US-PATENT-CLASS-310-5	N70-36535* #	c 15	US-PATENT-CLASS-310-5	N70-36536* #	c 32	US-PATENT-CLASS-310-5	N70-36616* #	c 17	US-PATENT-CLASS-310-5	N70-36617* #	c 33	US-PATENT-CLASS-310-5	N70-36618* #	c 14	US-PATENT-CLASS-310-5	N70-36654* #	c 31	US-PATENT-CLASS-310-5	N70-36778* #	c 03	US-PATENT-CLASS-310-5	N70-34850* #	c 15	US-PATENT-CLASS-310-5	N70-34856* #	c 02	US-PATENT-CLASS-310-5	N70-34857* #	c 05	US-PATENT-CLASS-310-5	N70-34858* #	c 02	US-PATENT-CLASS-310-5	N70-34859* #	c 15	US-PATENT-CLASS-310-5	N70-34880* #	c 28	US-PATENT-CLASS-310-5	N70-34861* #	c 15	US-PATENT-CLASS-310-5	N70-34946* #	c 06	US-PATENT-CLASS-310-5	N70-34966* #	c 31	US-PATENT-CLASS-310-5	N70-34967* #	c 15	US-PATENT-CLASS-310-5	N70-35087* #	c 15	US-PATENT-CLASS-310-5	N70-35089* #	c 21	US-PATENT-CLASS-310-5	N70-35152* #	c 05	US-PATENT-CLASS-310-5	N70-35219* #	c 09	US-PATENT-CLASS-310-5	N70-35220* #	c
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N70-37938* #	c 31	US-PATENT-3,093,000 NASA-CASE-XLA-00149 US-PATENT-APPL-SN-847023 US-PATENT-CLASS-244-1
N70-37939* #	c 02	US-PATENT-3,093,346 NASA-CASE-XLE-00222 US-PATENT-APPL-SN-77252 US-PATENT-CLASS-244-113
N70-37979* #	c 33	US-PATENT-3,098,630 NASA-CASE-XLA-00349 US-PATENT-APPL-SN-141220 US-PATENT-CLASS-62-467 US-PATENT-3,090,212
N70-37980* #	c 28	US-PATENT-3,098,630 NASA-CASE-XLE-00342 US-PATENT-APPL-SN-60531 US-PATENT-CLASS-60-35.5
N70-37981* #	c 31	US-PATENT-3,119,232 NASA-CASE-XLA-00138 US-PATENT-APPL-SN-8204 US-PATENT-CLASS-343-18
N70-37986* #	c 31	US-PATENT-3,115,630 NASA-CASE-XLA-00241 US-PATENT-APPL-SN-61329 US-PATENT-CLASS-244-1
N70-38009* #	c 02	US-PATENT-3,104,079 NASA-CASE-XLA-00195 US-PATENT-APPL-SN-60536 US-PATENT-CLASS-244-140
N70-38010* #	c 31	US-PATENT-3,079,113 NASA-CASE-XLA-00805 US-PATENT-APPL-SN-181829 US-PATENT-CLASS-244-46
N70-38011* #	c 02	US-PATENT-3,120,361 NASA-CASE-XLA-00350 US-PATENT-APPL-SN-153266 US-PATENT-CLASS-244-46
N70-38020* #	c 15	US-PATENT-3,104,082 NASA-CASE-XLE-00345 US-PATENT-APPL-SN-183978 US-PATENT-CLASS-62-55
N70-38181* #	c 28	US-PATENT-3,122,000 NASA-CASE-XNP-00217 US-PATENT-APPL-SN-180374 US-PATENT-CLASS-102-49
N70-38182* #	c 11	US-PATENT-3,122,098 NASA-CASE-XNP-00612 US-PATENT-APPL-SN-228507 US-PATENT-CLASS-220-63
N70-38196* #	c 11	US-PATENT-3,123,248 NASA-CASE-XMF-00424 US-PATENT-APPL-SN-159804 US-PATENT-CLASS-73-517
N70-38197* #	c 28	US-PATENT-3,141,340 NASA-CASE-XLE-00455 US-PATENT-APPL-SN-203409 US-PATENT-CLASS-75-222
N70-38198* #	c 17	US-PATENT-3,141,769 NASA-CASE-XLE-00231 US-PATENT-APPL-SN-64226 US-PATENT-CLASS-22-203
N70-38199* #	c 28	US-PATENT-3,138,837 NASA-CASE-XLE-00111 US-PATENT-APPL-SN-835152 US-PATENT-CLASS-60-39.48
N70-38200* #	c 07	US-PATENT-3,136,123 NASA-CASE-XLA-00414 US-PATENT-APPL-SN-209478 US-PATENT-CLASS-343-705
N70-38201* #	c 09	US-PATENT-3,132,342 NASA-CASE-XNP-00738 US-PATENT-APPL-SN-204015 US-PATENT-CLASS-174-115
N70-38202* #	c 11	US-PATENT-3,106,603 NASA-CASE-XNP-00425 US-PATENT-APPL-SN-180396 US-PATENT-CLASS-89-1.7
N70-38225* #	c 15	US-PATENT-3,112,672 NASA-CASE-XNP-00840 US-PATENT-APPL-SN-269222 US-PATENT-CLASS-267-1
N70-38249* #	c 28	US-PATENT-3,127,157 NASA-CASE-XNP-00249 US-PATENT-APPL-SN-180391 US-PATENT-CLASS-60-35.6
N70-38490* #	c 17	US-PATENT-3,120,738 NASA-CASE-XLE-00228 US-PATENT-APPL-SN-64224 US-PATENT-CLASS-29-183.5
N70-38504* #	c 28	US-PATENT-3,084,421 NASA-CASE-XMS-00583 US-PATENT-APPL-SN-182699 US-PATENT-CLASS-60-35.6
N70-38505* #	c 28	US-PATENT-3,135,089 NASA-CASE-XLE-00323 US-PATENT-APPL-SN-183977 US-PATENT-CLASS-60-35.6
N70-38601* #	c 15	US-PATENT-3,135,090 NASA-CASE-XLA-00679 US-PATENT-APPL-SN-213836 US-PATENT-CLASS-188-1
N70-38602* #	c 14	US-PATENT-3,128,845 NASA-CASE-XLE-00243 US-PATENT-APPL-SN-118203 US-PATENT-CLASS-324-106
N70-38603* #	c 15	US-PATENT-3,202,915 NASA-CASE-XNP-00450 US-PATENT-APPL-SN-180394 US-PATENT-CLASS-137-495
N70-38604* #	c 09	US-PATENT-3,105,515 NASA-CASE-XGS-00458 US-PATENT-APPL-SN-139006 US-PATENT-CLASS-307-88
N70-38620* #	c 15	US-PATENT-3,128,389 NASA-CASE-XNP-00476 US-PATENT-APPL-SN-182698 US-PATENT-CLASS-308-9
N70-38645* #	c 28	US-PATENT-3,132,903 NASA-CASE-XNP-00234 US-PATENT-APPL-SN-180382 US-PATENT-CLASS-60-35.5
N70-38675* #	c 11	US-PATENT-3,139,725 NASA-CASE-XNP-00459 US-PATENT-APPL-SN-180384 US-PATENT-CLASS-73-432
N70-38676* #	c 31	US-PATENT-3,187,583 NASA-CASE-XLA-00258 US-PATENT-APPL-SN-101029 US-PATENT-CLASS-244-1
N70-38710* #	c 28	US-PATENT-3,144,219 NASA-CASE-XMF-00148 US-PATENT-APPL-SN-118202 US-PATENT-CLASS-60-35.6
N70-38711* #	c 28	US-PATENT-3,122,885 NASA-CASE-XLE-00057 US-PATENT-APPL-SN-0914 US-PATENT-CLASS-60-35.55
N70-38712* #	c 09	US-PATENT-3,080,711 NASA-CASE-XMF-01129 US-PATENT-APPL-SN-273534 US-PATENT-CLASS-318-260
N70-38713* #	c 03	US-PATENT-3,147,422 NASA-CASE-XGS-00473 US-PATENT-APPL-SN-139012 US-PATENT-CLASS-200-39
N70-38995* #	c 09	US-PATENT-3,141,932 NASA-CASE-XGS-00131 US-PATENT-APPL-SN-14488 US-PATENT-CLASS-331-113
N70-38996* #	c 15	US-PATENT-3,150,329 NASA-CASE-XNP-00676 US-PATENT-APPL-SN-290870 US-PATENT-CLASS-222-389
N70-38997* #	c 12	US-PATENT-3,170,605 NASA-CASE-XMF-00658 US-PATENT-APPL-SN-216710 US-PATENT-CLASS-137-1
N70-38998* #	c 09	US-PATENT-3,110,318 NASA-CASE-XNP-00431 US-PATENT-APPL-SN-180380 US-PATENT-CLASS-340-147
N70-38995* #	c 28	US-PATENT-3,100,294 NASA-CASE-XLE-00085 US-PATENT-APPL-SN-25175 US-PATENT-CLASS-253-66
N70-38996* #	c 15	US-PATENT-3,070,349 NASA-CASE-XMF-00339 US-PATENT-APPL-SN-110591 US-PATENT-CLASS-308-9
N70-39897* #	c 18	US-PATENT-3,100,407 NASA-CASE-XLE-00353 US-PATENT-APPL-SN-65548 US-PATENT-CLASS-252-58
N70-39898* #	c 14	US-PATENT-3,072,574 NASA-CASE-XMF-00480 US-PATENT-APPL-SN-144804 US-PATENT-CLASS-248-346
N70-39899* #	c 28	US-PATENT-3,069,123 NASA-CASE-XLE-00005 US-PATENT-APPL-SN-718095 US-PATENT-CLASS-60-35.6
N70-39915* #	c 09	US-PATENT-3,067,573 NASA-CASE-XAC-00060 US-PATENT-APPL-SN-47121 US-PATENT-CLASS-200-19
N70-39922* #	c 05	US-PATENT-3,076,065 NASA-CASE-XMS-01115 US-PATENT-APPL-SN-277404 US-PATENT-CLASS-128-29
N70-39924* #	c 15	US-PATENT-3,229,689 NASA-CASE-XMF-00640 US-PATENT-APPL-SN-341467 US-PATENT-CLASS-228-50
N70-39925* #	c 28	US-PATENT-3,229,884 NASA-CASE-XLE-00660 US-PATENT-APPL-SN-231604 US-PATENT-CLASS-313-11.5
N70-39930* #	c 03	US-PATENT-3,229,139 NASA-CASE-XLA-00791 US-PATENT-APPL-SN-347960 US-PATENT-CLASS-102-49
N70-39931* #	c 28	US-PATENT-3,229,636 NASA-CASE-XNP-01104 US-PATENT-APPL-SN-290867 US-PATENT-CLASS-60-39.48
N70-40003* #	c 14	US-PATENT-3,229,463 NASA-CASE-XGS-01036 US-PATENT-APPL-SN-227692 US-PATENT-CLASS-88-14
N70-40015* #	c 26	US-PATENT-3,229,568 NASA-CASE-XLA-02057 US-PATENT-APPL-SN-320595 US-PATENT-CLASS-23-277
N70-40016* #	c 30	US-PATENT-3,230,053 NASA-CASE-XGS-00619 US-PATENT-APPL-SN-264728 US-PATENT-CLASS-244-1
N70-40062* #	c 15	US-PATENT-3,229,930 NASA-CASE-XMS-01624 US-PATENT-APPL-SN-422867 US-PATENT-CLASS-55-408
N70-40063* #	c 07	US-PATENT-3,224,173 NASA-CASE-XMS-00893 US-PATENT-APPL-SN-251449 US-PATENT-CLASS-343-18
N70-40123* #	c 09	US-PATENT-3,224,001 NASA-CASE-XGS-01881 US-PATENT-APPL-SN-155584 US-PATENT-CLASS-324-43
N70-40124* #	c 12	US-PATENT-3,218,547 NASA-CASE-XLE-01512 US-PATENT-APPL-SN-315096 US-PATENT-CLASS-149-2
N70-40125* #	c 08	US-PATENT-3,215,572 NASA-CASE-XAC-00404 US-PATENT-APPL-SN-209801 US-PATENT-CLASS-340-347
N70-40156* #	c 15	US-PATENT-3,216,007 NASA-CASE-XLA-01019 US-PATENT-APPL-SN-282817 US-PATENT-CLASS-248-358
N70-40157* #	c 14	US-PATENT-3,223,374 NASA-CASE-XLA-00487 US-PATENT-APPL-SN-236748 US-PATENT-CLASS-73-178
N70-40180* #	c 15	US-PATENT-3,221,549 NASA-CASE-XAC-00472 US-PATENT-APPL-SN-236749 US-PATENT-CLASS-73-142
N70-40201* #	c 14	US-PATENT-3,224,263 NASA-CASE-XLE-00720 US-PATENT-APPL-SN-302749 US-PATENT-CLASS-73-134
N70-40202* #	c 07	US-PATENT-3,221,547 NASA-CASE-XMF-00437 US-PATENT-APPL-SN-120795 US-PATENT-CLASS-343-705
N70-40203* #	c 14	US-PATENT-3,077,599 NASA-CASE-XLE-00893 US-PATENT-APPL-SN-256931 US-PATENT-CLASS-73-116
N70-40204* #	c 15	US-PATENT-3,201,980 NASA-CASE-XMF-00722 US-PATENT-APPL-SN-347626 US-PATENT-CLASS-228-50
N70-40233* #	c 14	US-PATENT-3,219,250 NASA-CASE-XMS-01546 US-PATENT-APPL-SN-386467 US-PATENT-CLASS-222-45
N70-40234* #	c 09	US-PATENT-3,228,558 NASA-CASE-XLE-01716 US-PATENT-APPL-SN-349778 US-PATENT-CLASS-126-270
N70-40238* #	c 14	US-PATENT-3,229,682 NASA-CASE-XMF-00908 US-PATENT-APPL-SN-241085 US-PATENT-CLASS-250-201
N70-40239* #	c 14	US-PATENT-3,229,099 NASA-CASE-XLA-00183 US-PATENT-APPL-SN-199202 US-PATENT-CLASS-250-203
N70-40240* #	c 14	US-PATENT-3,229,102 NASA-CASE-XHQ-04106 US-PATENT-APPL-SN-91180 US-PATENT-CLASS-250-105
N70-40272* #	c 09	US-PATENT-3,143,651 NASA-CASE-XMF-00701 US-PATENT-APPL-SN-261917 US-PATENT-CLASS-307-88.5

N70-40273* #	c 14	US-PATENT-3,218,479	N70-41580* #	c 03	US-PATENT-3,295,556	N70-41811* #	c 15	US-PATENT-3,287,031
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		US-PATENT-APPL-SN-280776			US-PATENT-APPL-SN-277833			US-PATENT-APPL-SN-369337
N70-40309* #	c 30	US-PATENT-CLASS-95-58	N70-41581* #	c 05	US-PATENT-CLASS-126-270	N70-41812* #	c 14	US-PATENT-CLASS-137-539
		US-PATENT-3,217,624			US-PATENT-3,295,512			US-PATENT-3,302,662
		NASA-CASE-XLA-00210			NASA-CASE-XAC-01404			NASA-CASE-XMS-03792
N70-40353* #	c 30	US-PATENT-APPL-SN-82658	N70-41582* #	c 28	US-PATENT-APPL-SN-363348	N70-41818* #	c 28	US-PATENT-APPL-SN-516159
		US-PATENT-CLASS-343-18			US-PATENT-CLASS-74-471			US-PATENT-CLASS-200-61.45
		US-PATENT-3,220,004			US-PATENT-3,295,386			US-PATENT-3,303,304
N70-40354* #	c 15	NASA-CASE-XMF-03198	N70-41583* #	c 18	NASA-CASE-XMF-01813	N70-41819* #	c 05	NASA-CASE-XLE-00150
		US-PATENT-APPL-SN-370134			US-PATENT-APPL-SN-375674			US-PATENT-APPL-SN-843032
		US-PATENT-CLASS-89-1.7			US-PATENT-CLASS-181-52			US-PATENT-CLASS-29-157.3
N70-40367* #	c 28	US-PATENT-3,224,336	N70-41588* #	c 31	US-PATENT-3,270,835	N70-41829* #	c 15	US-PATENT-3,035,333
		NASA-CASE-XMF-01045			NASA-CASE-XMF-01030			NASA-CASE-XAC-00405
		US-PATENT-APPL-SN-355130			US-PATENT-APPL-SN-317389			US-PATENT-APPL-SN-158916
N70-40400* #	c 14	US-PATENT-CLASS-188-1	N70-41589* #	c 02	US-PATENT-CLASS-161-115	N70-41855* #	c 31	US-PATENT-CLASS-128-1
		US-PATENT-3,228,492			US-PATENT-3,296,060			US-PATENT-3,302,633
		NASA-CASE-XLE-00177			NASA-CASE-XMF-01973			NASA-CASE-XMF-01371
N70-41275* #	c 28	US-PATENT-APPL-SN-10812	N70-41628* #	c 25	US-PATENT-APPL-SN-375682	N70-41856* #	c 21	US-PATENT-APPL-SN-353634
		US-PATENT-CLASS-60-35.3			US-PATENT-CLASS-244-1			US-PATENT-CLASS-287-119
		US-PATENT-3,045,424			US-PATENT-3,295,790			US-PATENT-3,302,960
N70-41297* #	c 05	NASA-CASE-XAC-00648	N70-41629* #	c 15	NASA-CASE-XMF-01174	N70-41863* #	c 02	NASA-CASE-XNP-02982
		US-PATENT-APPL-SN-216939			US-PATENT-APPL-SN-410331			US-PATENT-APPL-SN-388966
		US-PATENT-CLASS-73-147			US-PATENT-CLASS-244-100			US-PATENT-CLASS-244-1
N70-41310* #	c 15	US-PATENT-3,218,850	N70-41630* #	c 02	US-PATENT-3,295,798	N70-41864* #	c 03	US-PATENT-3,304,028
		NASA-CASE-XNP-01390			NASA-CASE-XAC-00319			NASA-CASE-XNP-01307
		US-PATENT-APPL-SN-424157			US-PATENT-APPL-SN-77251			US-PATENT-APPL-SN-390250
N70-41311* #	c 28	US-PATENT-CLASS-60-259	N70-41631* #	c 31	US-PATENT-CLASS-315-111	N70-41871* #	c 31	US-PATENT-CLASS-244-1
		US-PATENT-3,300,981			US-PATENT-3,229,155			US-PATENT-3,286,953
		NASA-CASE-XMS-01492			N70-41646* #			c 15
US-PATENT-APPL-SN-398131	US-PATENT-APPL-SN-411944	US-PATENT-APPL-SN-379417						
US-PATENT-CLASS-55-35	US-PATENT-CLASS-285-331	US-PATENT-CLASS-244-16						
US-PATENT-3,300,949	US-PATENT-3,301,578	US-PATENT-3,286,957						
N70-41313* #	c 15	NASA-CASE-XNP-01567	N70-41647* #	c 14	NASA-CASE-XMS-00907	N70-41922* #	c 28	NASA-CASE-XGS-01419
		US-PATENT-APPL-SN-448898			US-PATENT-APPL-SN-428890			US-PATENT-APPL-SN-323182
		US-PATENT-CLASS-248-178			US-PATENT-CLASS-244-138			US-PATENT-CLASS-136-179
N70-41329* #	c 05	US-PATENT-3,295,808	N70-41655* #	c 09	US-PATENT-3,301,511	N70-41929* #	c 09	US-PATENT-3,287,174
		NASA-CASE-XNP-00876			NASA-CASE-XMS-04142			NASA-CASE-XMS-04390
		US-PATENT-APPL-SN-377784			US-PATENT-APPL-SN-422865			US-PATENT-APPL-SN-502729
N70-41330* #	c 14	US-PATENT-CLASS-60-251	N70-41676* #	c 14	US-PATENT-CLASS-244-1	N70-41930* #	c 21	US-PATENT-CLASS-62-45
		US-PATENT-3,298,182			US-PATENT-3,301,507			US-PATENT-3,304,729
		NASA-CASE-XMS-01615			NASA-CASE-XLE-01449			NASA-CASE-XNP-01749
US-PATENT-APPL-SN-329595	US-PATENT-APPL-SN-330209	US-PATENT-APPL-SN-440033						
US-PATENT-CLASS-128-2.05	US-PATENT-CLASS-137-197	US-PATENT-CLASS-149-109						
US-PATENT-3,298,362	US-PATENT-3,295,545	US-PATENT-3,305,415						
N70-41330* #	c 14	NASA-CASE-XLE-00688	N70-41677* #	c 11	NASA-CASE-XGS-00769	N70-41922* #	c 28	NASA-CASE-XNP-02839
		US-PATENT-APPL-SN-334672			US-PATENT-APPL-SN-319893			US-PATENT-APPL-SN-477333
		US-PATENT-CLASS-73-32			US-PATENT-CLASS-242-55.19			US-PATENT-CLASS-60-202
N70-41331* #	c 07	US-PATENT-3,298,221	N70-41678* #	c 07	US-PATENT-3,295,782	N70-41929* #	c 09	US-PATENT-3,304,718
		NASA-CASE-XLA-01400			NASA-CASE-XMF-00906			US-PATENT-CLASS-304,718
		US-PATENT-APPL-SN-363653			US-PATENT-APPL-SN-264731			NASA-CASE-XNP-01951
US-PATENT-CLASS-325-65	US-PATENT-CLASS-324-113	US-PATENT-APPL-SN-413662						
US-PATENT-3,296,531	US-PATENT-3,287,640	US-PATENT-CLASS-335-300						
N70-41332* #	c 14	NASA-CASE-XLA-00495	N70-41675* #	c 09	US-PATENT-3,305,810	N70-41930* #	c 21	US-PATENT-3,305,810
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		US-PATENT-CLASS-324-70			US-PATENT-APPL-SN-347101			US-PATENT-APPL-SN-432027
US-PATENT-3,296,526	US-PATENT-CLASS-307-88.5	US-PATENT-CLASS-343-12						
N70-41366* #	c 14	US-PATENT-3,302,040	N70-41676* #	c 14	US-PATENT-3,302,040	N70-41946* #	c 14	US-PATENT-3,305,861
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		US-PATENT-APPL-SN-403960			US-PATENT-APPL-SN-346356			US-PATENT-APPL-SN-735911
US-PATENT-CLASS-73-147	US-PATENT-CLASS-250-71	US-PATENT-CLASS-88-14						
US-PATENT-3,301,046	US-PATENT-3,302,023	US-PATENT-2,960,002						
N70-41367* #	c 32	NASA-CASE-XGS-00938	N70-41677* #	c 11	NASA-CASE-XMF-01772	N70-41948* #	c 31	NASA-CASE-XMF-01899
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		US-PATENT-CLASS-214-1			US-PATENT-CLASS-73-116			US-PATENT-CLASS-60-257
N70-41370* #	c 32	US-PATENT-3,295,699	N70-41678* #	c 07	US-PATENT-3,295,366	N70-41954* #	c 03	US-PATENT-3,304,724
		NASA-CASE-XNP-01962			NASA-CASE-XGS-02608			NASA-CASE-XAC-03392
		US-PATENT-APPL-SN-369640			US-PATENT-APPL-SN-456578			US-PATENT-APPL-SN-430776
US-PATENT-CLASS-92-94	US-PATENT-CLASS-343-18	US-PATENT-CLASS-74-519						
US-PATENT-3,298,285	US-PATENT-3,289,205	US-PATENT-3,304,799						
N70-41371* #	c 15	NASA-CASE-XMF-01452	N70-41679* #	c 15	NASA-CASE-XLA-01441	N70-41955* #	c 14	NASA-CASE-XNP-02029
		US-PATENT-APPL-SN-356692			US-PATENT-APPL-SN-516151			US-PATENT-APPL-SN-221276
		US-PATENT-CLASS-29-271			US-PATENT-CLASS-102-49			US-PATENT-CLASS-88-14
N70-41372* #	c 07	US-PATENT-3,300,847	N70-41680* #	c 07	US-PATENT-3,302,569	N70-41957* #	c 14	US-PATENT-3,323,408
		NASA-CASE-XLA-01127			NASA-CASE-XNP-02723			NASA-CASE-XAC-01101
		US-PATENT-APPL-SN-363654			US-PATENT-APPL-SN-371857			US-PATENT-APPL-SN-355129
US-PATENT-CLASS-325-65	US-PATENT-CLASS-343-14	US-PATENT-CLASS-73-141						
US-PATENT-3,300,731	US-PATENT-3,287,725	US-PATENT-3,304,773						
N70-41373* #	c 31	NASA-CASE-XMS-01906	N70-41681* #	c 14	NASA-CASE-XAC-02877	N70-41960* #	c 15	NASA-CASE-XNP-05082
		US-PATENT-APPL-SN-339040			US-PATENT-APPL-SN-449902			US-PATENT-APPL-SN-521753
		US-PATENT-CLASS-244-1			US-PATENT-CLASS-73-30			US-PATENT-CLASS-174-68.5
US-PATENT-3,300,162	US-PATENT-3,295,360	US-PATENT-3,321,570						
N70-41447* #	c 28	NASA-CASE-XNP-00732	N70-41682* #	c 14	NASA-CASE-XMS-05936	N70-41961* #	c 08	NASA-CASE-XNP-00911
		US-PATENT-APPL-SN-261918			US-PATENT-APPL-SN-557868			US-PATENT-APPL-SN-280777
		US-PATENT-CLASS-210-314			US-PATENT-CLASS-73-517			US-PATENT-CLASS-178-67
US-PATENT-3,295,684	US-PATENT-3,295,377	US-PATENT-3,305,636						
N70-41576* #	c 28	NASA-CASE-XLE-00519	N70-41717* #	c 09	NASA-CASE-XMS-02087	N70-41964* #	c 10	NASA-CASE-XGS-01983
		US-PATENT-APPL-SN-249542			US-PATENT-APPL-SN-439489			US-PATENT-APPL-SN-388023
		US-PATENT-CLASS-313-63			US-PATENT-CLASS-165-1			US-PATENT-CLASS-333-79
US-PATENT-3,287,582	US-PATENT-3,301,315	US-PATENT-3,305,801						
N70-41578* #	c 16	NASA-CASE-XGS-01504	N70-41807* #	c 14	NASA-CASE-XNP-01472	N70-41967* #	c 28	NASA-CASE-XLA-02651
		US-PATENT-APPL-SN-340113			US-PATENT-APPL-SN-321656			US-PATENT-APPL-SN-449901
		US-PATENT-CLASS-331-94			US-PATENT-CLASS-178-7.2			US-PATENT-CLASS-102-49
US-PATENT-3,287,660	US-PATENT-3,287,496	US-PATENT-3,304,865						
N70-41579* #	c 32	NASA-CASE-XLE-00620	N70-41808* #	c 15	NASA-CASE-XMS-02532	N70-41991* #	c 10	NASA-CASE-XNP-03128
		US-PATENT-APPL-SN-304698			US-PATENT-APPL-SN-398132			US-PATENT-APPL-SN-397665
		US-PATENT-CLASS-138-119			US-PATENT-CLASS-285-27			US-PATENT-CLASS-250-83.6

N70-41992* #	c 28	US-PATENT-3,321,628 NASA-CASE-XLE-00685 US-PATENT-APPL-SN-407595 US-PATENT-CLASS-80-280 US-PATENT-3,321,922	N71-10616* #	c 14	US-PATENT-3,311,315 NASA-CASE-XMF-02433 US-PATENT-APPL-SN-405630 US-PATENT-CLASS-73-70.2 US-PATENT-3,310,978	N71-10781* #	c 14	US-PATENT-3,316,716 NASA-CASE-XLE-01481 US-PATENT-APPL-SN-319905 US-PATENT-CLASS-73-99 US-PATENT-3,282,091
N70-41993* #	c 15	NASA-CASE-XLE-01300 US-PATENT-APPL-SN-380980 US-PATENT-CLASS-73-100 US-PATENT-3,323,356	N71-10617* #	c 15	NASA-CASE-XMF-01887 US-PATENT-APPL-SN-422888 US-PATENT-CLASS-308-5 US-PATENT-3,325,229	N71-10782* #	c 15	NASA-CASE-XKS-01985 US-PATENT-APPL-SN-357337 US-PATENT-CLASS-285-24 US-PATENT-3,319,979
N70-41994* #	c 14	NASA-CASE-XMF-02822 US-PATENT-APPL-SN-403959 US-PATENT-CLASS-73-194 US-PATENT-3,323,382	N71-10618* #	c 09	NASA-CASE-XNP-03332 US-PATENT-APPL-SN-368123 US-PATENT-CLASS-313-63 US-PATENT-3,311,772	N71-10797* #	c 14	NASA-CASE-XLE-01246 US-PATENT-APPL-SN-249537 US-PATENT-CLASS-324-61 US-PATENT-3,324,388
N70-42000* #	c 05	NASA-CASE-XMS-03371 US-PATENT-APPL-SN-418931 US-PATENT-CLASS-73-432 US-PATENT-3,323,370	N71-10658* #	c 15	NASA-CASE-XMS-03252 US-PATENT-APPL-SN-425362 US-PATENT-CLASS-80-54.5 US-PATENT-3,318,093	N71-10798* #	c 09	NASA-CASE-XMS-00945 US-PATENT-APPL-SN-385530 US-PATENT-CLASS-330-22 US-PATENT-3,319,175
N70-42003* #	c 32	NASA-CASE-XLA-02131 US-PATENT-APPL-SN-377777 US-PATENT-CLASS-73-90 US-PATENT-3,304,788	N71-10659* #	c 09	NASA-CASE-XNP-01383 US-PATENT-APPL-SN-369336 US-PATENT-CLASS-324-77 US-PATENT-3,317,832	N71-10799* #	c 15	NASA-CASE-XLA-01807 US-PATENT-APPL-SN-442558 US-PATENT-CLASS-287-189.36 US-PATENT-3,318,622
N70-42015* #	c 31	NASA-CASE-XLA-01987 US-PATENT-APPL-SN-457875 US-PATENT-CLASS-244-135 US-PATENT-3,321,159	N71-10672* #	c 15	NASA-CASE-XLA-01091 US-PATENT-APPL-SN-351259 US-PATENT-CLASS-264-102 US-PATENT-3,317,641	N71-10809* #	c 15	NASA-CASE-XMF-02107 US-PATENT-APPL-SN-384811 US-PATENT-CLASS-140-124 US-PATENT-3,318,343
N70-42016* #	c 02	NASA-CASE-XLA-01290 US-PATENT-APPL-SN-393451 US-PATENT-CLASS-244-42 US-PATENT-3,321,157	N71-10673* #	c 09	NASA-CASE-XGS-01473 US-PATENT-APPL-SN-364867 US-PATENT-CLASS-307-88.5 US-PATENT-3,317,751	N71-11037* #	c 02	NASA-CASE-XLA-06824-2 US-PATENT-APPL-SN-775966 US-PATENT-CLASS-244-31 US-PATENT-3,508,724
N70-42017* #	c 15	NASA-CASE-XMS-04072 US-PATENT-APPL-SN-485980 US-PATENT-CLASS-30-228 US-PATENT-3,320,669	N71-10678* #	c 07	NASA-CASE-XNP-03134 US-PATENT-APPL-SN-422095 US-PATENT-CLASS-333-21 US-PATENT-3,324,423	N71-11038* #	c 02	NASA-CASE-XLA-06958 US-PATENT-APPL-SN-551815 US-PATENT-CLASS-244-44 US-PATENT-3,310,261
N70-42032* #	c 10	NASA-CASE-XNP-02654 US-PATENT-APPL-SN-435387 US-PATENT-CLASS-307-88.5 US-PATENT-3,321,645	N71-10677* #	c 09	NASA-CASE-XGS-01451 US-PATENT-APPL-SN-405629 US-PATENT-CLASS-318-138 US-PATENT-3,324,370	N71-11039* #	c 02	NASA-CASE-MS-12111-1 US-PATENT-APPL-SN-775877 US-PATENT-CLASS-244-23 US-PATENT-3,490,721
N70-42033* #	c 15	NASA-CASE-XNP-02092 US-PATENT-APPL-SN-371856 US-PATENT-CLASS-156-345 US-PATENT-3,323,967	N71-10678* #	c 21	NASA-CASE-XGS-01159 US-PATENT-APPL-SN-332313 US-PATENT-CLASS-250-203 US-PATENT-3,311,748	N71-11041* #	c 02	NASA-CASE-XLA-03659 US-PATENT-APPL-SN-444087 US-PATENT-CLASS-244-46 US-PATENT-3,270,989
N70-42034* #	c 15	NASA-CASE-XNP-01412 US-PATENT-APPL-SN-426702 US-PATENT-CLASS-175-310 US-PATENT-3,321,034	N71-10728* #	c 03	NASA-CASE-XNP-01464 US-PATENT-APPL-SN-430778 US-PATENT-CLASS-136-182 US-PATENT-3,317,352	N71-11043* #	c 02	NASA-CASE-XLA-08801-1 US-PATENT-APPL-SN-710533 US-PATENT-CLASS-244-43 US-PATENT-3,493,197
N70-42073* #	c 03	NASA-CASE-XFR-04104 US-PATENT-APPL-SN-476759 US-PATENT-CLASS-74-471 US-PATENT-3,323,386	N71-10746* #	c 11	NASA-CASE-XMS-02977 US-PATENT-APPL-SN-416938 US-PATENT-CLASS-35-12 US-PATENT-3,281,963	N71-11049* #	c 03	NASA-CASE-NPO-10109 US-PATENT-APPL-SN-701654 US-PATENT-CLASS-136-89 US-PATENT-3,532,551
N70-42074* #	c 14	NASA-CASE-XLE-02988 US-PATENT-APPL-SN-516794 US-PATENT-CLASS-116-117 US-PATENT-3,323,484	N71-10747* #	c 31	NASA-CASE-XMF-00442 US-PATENT-APPL-SN-202030 US-PATENT-CLASS-343-705 US-PATENT-3,277,486	N71-11050* #	c 03	NASA-CASE-XNP-06506 US-PATENT-APPL-SN-577778 US-PATENT-CLASS-136-89 US-PATENT-3,446,676
N70-42075* #	c 31	NASA-CASE-XMS-02677 US-PATENT-APPL-SN-472066 US-PATENT-CLASS-244-1 US-PATENT-3,321,154	N71-10748* #	c 11	NASA-CASE-XFR-04147 US-PATENT-APPL-SN-476761 US-PATENT-CLASS-35-12 US-PATENT-3,281,965	N71-11051* #	c 03	NASA-CASE-XNP-03378 US-PATENT-APPL-SN-360878 US-PATENT-CLASS-136-170 US-PATENT-3,282,740
N71-10500* #	c 14	NASA-CASE-XLE-01609 US-PATENT-APPL-SN-438797 US-PATENT-CLASS-73-290 US-PATENT-3,326,043	N71-10771* #	c 21	NASA-CASE-XNP-03914 US-PATENT-APPL-SN-468647 US-PATENT-CLASS-250-203 US-PATENT-3,317,731	N71-11052* #	c 03	NASA-CASE-XLE-04526 US-PATENT-APPL-SN-640457 US-PATENT-CLASS-136-88 US-PATENT-3,507,704
N71-10560* #	c 24	NASA-CASE-XLE-00808 US-PATENT-APPL-SN-307269 US-PATENT-CLASS-148-188 US-PATENT-3,310,443	N71-10772* #	c 18	NASA-CASE-XLE-01765 US-PATENT-APPL-SN-318477 US-PATENT-CLASS-117-65.2 US-PATENT-3,317,341	N71-11053* #	c 03	NASA-CASE-XGS-00886 US-PATENT-APPL-SN-319894 US-PATENT-CLASS-136-132 US-PATENT-3,282,739
N71-10574* #	c 28	NASA-CASE-XLE-01902 US-PATENT-APPL-SN-485656 US-PATENT-CLASS-60-202 US-PATENT-3,324,659	N71-10773* #	c 14	NASA-CASE-XLA-02605 US-PATENT-APPL-SN-450138 US-PATENT-CLASS-177-210 US-PATENT-3,316,991	N71-11055* #	c 03	NASA-CASE-XMF-05843 US-PATENT-APPL-SN-666553 US-PATENT-CLASS-310-4 US-PATENT-3,509,386
N71-10577* #	c 15	NASA-CASE-XLE-04677 US-PATENT-APPL-SN-447928 US-PATENT-CLASS-220-67 US-PATENT-3,326,407	N71-10774* #	c 14	NASA-CASE-XLA-01131 US-PATENT-APPL-SN-322545 US-PATENT-CLASS-73-23 US-PATENT-3,312,101	N71-11056* #	c 03	NASA-CASE-XNP-05821 US-PATENT-APPL-SN-545223 US-PATENT-CLASS-136-89 US-PATENT-3,493,437
N71-10578* #	c 10	NASA-CASE-XMS-01554 US-PATENT-APPL-SN-414482 US-PATENT-CLASS-323-8 US-PATENT-3,325,723	N71-10775* #	c 07	NASA-CASE-XLA-00901 US-PATENT-APPL-SN-269212 US-PATENT-CLASS-325-305 US-PATENT-3,311,832	N71-11057* #	c 03	NASA-CASE-MS-13112 US-PATENT-APPL-SN-765738 US-PATENT-CLASS-290-40 US-PATENT-3,508,070
N71-10582* #	c 31	NASA-CASE-XLA-02132 US-PATENT-APPL-SN-453227 US-PATENT-CLASS-102-49 US-PATENT-3,286,630	N71-10776* #	c 11	NASA-CASE-XLA-03127 US-PATENT-APPL-SN-447927 US-PATENT-CLASS-35-12 US-PATENT-3,281,964	N71-11058* #	c 03	NASA-CASE-XGS-01475 US-PATENT-APPL-SN-344793 US-PATENT-CLASS-244-1 US-PATENT-3,459,391
N71-10604* #	c 11	NASA-CASE-XMF-03248 US-PATENT-APPL-SN-377780 US-PATENT-CLASS-73-116 US-PATENT-3,310,980	N71-10777* #	c 11	NASA-CASE-XLE-01533 US-PATENT-APPL-SN-334678 US-PATENT-CLASS-55-400 US-PATENT-3,282,035	N71-11189* #	c 05	NASA-CASE-XFR-10856 US-PATENT-APPL-SN-626376 US-PATENT-CLASS-534,727 US-PATENT-3,508,541
N71-10607* #	c 26	NASA-CASE-XLE-02792 US-PATENT-APPL-SN-352400 US-PATENT-CLASS-148-1.5 US-PATENT-3,311,510	N71-10778* #	c 15	NASA-CASE-XNP-00710 US-PATENT-APPL-SN-271821 US-PATENT-CLASS-251-61 US-PATENT-3,317,180	N71-11190* #	c 05	NASA-CASE-XMS-04935 US-PATENT-APPL-SN-518487 US-PATENT-CLASS-128-142.5 US-PATENT-3,502,074
N71-10608* #	c 03	NASA-CASE-XGS-03505 US-PATENT-APPL-SN-486167 US-PATENT-CLASS-136-28 US-PATENT-3,311,502	N71-10779* #	c 14	NASA-CASE-XMF-02307 US-PATENT-APPL-SN-422869 US-PATENT-CLASS-73-40.5 US-PATENT-3,316,752	N71-11193* #	c 05	NASA-CASE-ARC-10043-1 US-PATENT-APPL-SN-676012 US-PATENT-CLASS-128-2.1 US-PATENT-3,508,541
N71-10609* #	c 07	NASA-CASE-XGS-01223 US-PATENT-APPL-SN-319892 US-PATENT-CLASS-242-55.19	N71-10780* #	c 28	NASA-CASE-XLA-01043 US-PATENT-APPL-SN-379768 US-PATENT-CLASS-60-225	N71-11194* #	c 05	NASA-CASE-XLA-05332 US-PATENT-APPL-SN-757861 US-PATENT-CLASS-2-2.1 US-PATENT-3,534,407



N71-11195* #	c 05	NASA-CASE-LAR-10007-1 US-PATENT-APPL-SN-770203 US-PATENT-CLASS-2-2.1 US-PATENT-3,534,406	N71-12258* #	c 03	NASA-CASE-XLA-00711 US-PATENT-APPL-SN-357334 US-PATENT-CLASS-89-1.7 US-PATENT-3,249,012	N71-12506* #	c 08	NASA-CASE-XNP-08832 US-PATENT-APPL-SN-681692 US-PATENT-CLASS-340-172.5 US-PATENT-3,535,696
N71-11199* #	c 05	NASA-CASE-KXS-02342 US-PATENT-APPL-SN-407603 US-PATENT-CLASS-182-191 US-PATENT-3,262,518	N71-12259* #	c 03	NASA-CASE-XLA-01396 US-PATENT-APPL-SN-357336 US-PATENT-CLASS-89-1.7 US-PATENT-3,249,013	N71-12507* #	c 08	NASA-CASE-XLA-01952 US-PATENT-APPL-SN-676386 US-PATENT-CLASS-340-324 US-PATENT-3,537,096
N71-11202* #	c 05	NASA-CASE-XFR-08403 US-PATENT-APPL-SN-704420 US-PATENT-CLASS-73-23 US-PATENT-3,507,146	N71-12260* #	c 03	NASA-CASE-XNP-01020 US-PATENT-APPL-SN-430780 US-PATENT-CLASS-60-87 US-PATENT-3,238,730	N71-12513* #	c 09	NASA-CASE-XGS-07801 US-PATENT-APPL-SN-640452 US-PATENT-CLASS-148-188 US-PATENT-3,490,965
N71-11203* #	c 05	NASA-CASE-XMS-09632-1 US-PATENT-APPL-SN-791693 US-PATENT-CLASS-128-142.5 US-PATENT-3,500,827	N71-12335* #	c 05	NASA-CASE-XMS-00784 US-PATENT-APPL-SN-358127 US-PATENT-CLASS-2-2.1 US-PATENT-3,286,274	N71-12514* #	c 09	NASA-CASE-XLA-07497 US-PATENT-APPL-SN-631848 US-PATENT-CLASS-307-252 US-PATENT-3,491,255
N71-11207* #	c 05	NASA-CASE-XLA-03213 US-PATENT-APPL-SN-621715 US-PATENT-CLASS-202-182 US-PATENT-3,444,051	N71-12336* #	c 05	NASA-CASE-XMS-05304 US-PATENT-APPL-SN-511567 US-PATENT-CLASS-244-4 US-PATENT-3,270,986	N71-12515* #	c 09	NASA-CASE-XNP-08836 US-PATENT-APPL-SN-668968 US-PATENT-CLASS-340-174 US-PATENT-3,535,702
N71-11235* #	c 06	NASA-CASE-XLA-03104 US-PATENT-APPL-SN-510155 US-PATENT-CLASS-260-78 US-PATENT-3,518,232	N71-12341* #	c 05	NASA-CASE-MFS-14671 US-PATENT-APPL-SN-723476 US-PATENT-CLASS-297-385 US-PATENT-3,516,711	N71-12516* #	c 09	NASA-CASE-XNP-09768 US-PATENT-APPL-SN-698629 US-PATENT-CLASS-307-243 US-PATENT-3,535,554
N71-11236* #	c 06	NASA-CASE-XMF-08651 US-PATENT-APPL-SN-593594 US-PATENT-CLASS-260-72.5 US-PATENT-3,526,611	N71-12342* #	c 05	NASA-CASE-XAC-05706 US-PATENT-APPL-SN-592694 US-PATENT-CLASS-325-143 US-PATENT-3,453,546	N71-12517* #	c 09	NASA-CASE-XAC-10608-1 US-PATENT-APPL-SN-710561 US-PATENT-CLASS-333-80 US-PATENT-3,493,901
N71-11237* #	c 06	NASA-CASE-XMF-10753 US-PATENT-APPL-SN-668751 US-PATENT-CLASS-260-46.5 US-PATENT-3,444,127	N71-12343* #	c 05	NASA-CASE-MS-11253 US-PATENT-APPL-SN-695973 US-PATENT-CLASS-297-68 US-PATENT-3,466,085	N71-12518* #	c 09	NASA-CASE-XNP-09808 US-PATENT-APPL-SN-692471 US-PATENT-CLASS-200-61.42 US-PATENT-3,488,461
N71-11238* #	c 06	NASA-CASE-XLA-08802 US-PATENT-APPL-SN-640454 US-PATENT-CLASS-260-78 US-PATENT-3,532,673	N71-12344* #	c 05	NASA-CASE-XMS-09636 US-PATENT-APPL-SN-586330 US-PATENT-CLASS-2-2.1 US-PATENT-3,492,672	N71-12519* #	c 09	NASA-CASE-XMF-06519 US-PATENT-APPL-SN-656952 US-PATENT-CLASS-328-110 US-PATENT-3,535,644
N71-11239* #	c 06	NASA-CASE-XMF-08655 US-PATENT-APPL-SN-593593 US-PATENT-CLASS-260-72.5 US-PATENT-3,516,970	N71-12345* #	c 05	NASA-CASE-MS-12086-1 US-PATENT-APPL-SN-812999 US-PATENT-CLASS-29-400 US-PATENT-3,490,130	N71-12520* #	c 09	NASA-CASE-NPO-10230 US-PATENT-APPL-SN-691735 US-PATENT-CLASS-307-229 US-PATENT-3,535,547
N71-11240* #	c 06	NASA-CASE-MFS-13994-1 US-PATENT-APPL-SN-715975 US-PATENT-CLASS-260-46.5 US-PATENT-3,516,964	N71-12346* #	c 05	NASA-CASE-XMS-04212-1 US-PATENT-APPL-SN-607461 US-PATENT-CLASS-128-2.1 US-PATENT-3,490,440	N71-12521* #	c 09	NASA-CASE-ARC-10030 US-PATENT-APPL-SN-679885 US-PATENT-CLASS-313-110 US-PATENT-3,493,805
N71-11242* #	c 06	NASA-CASE-XMF-08656 US-PATENT-APPL-SN-593605 US-PATENT-CLASS-260-2.5 US-PATENT-3,493,524	N71-12351* #	c 05	NASA-CASE-LAR-10056 US-PATENT-APPL-SN-674357 US-PATENT-CLASS-224-25 US-PATENT-3,493,153	N71-12526* #	c 09	NASA-CASE-MS-12135-1 US-PATENT-APPL-SN-761404 US-PATENT-CLASS-317-31 US-PATENT-3,448,341
N71-11243* #	c 06	NASA-CASE-XMF-08652 US-PATENT-APPL-SN-593606 US-PATENT-CLASS-260-2 US-PATENT-3,493,522	N71-12389* #	c 07	NASA-CASE-XLA-01090 US-PATENT-APPL-SN-741824 US-PATENT-CLASS-250-199 US-PATENT-RE-26,548	N71-12539* #	c 09	NASA-CASE-ERC-10552 US-PATENT-APPL-SN-720125 US-PATENT-CLASS-178-7.7 US-PATENT-3,535,446
N71-11266* #	c 07	NASA-CASE-XLA-03076 US-PATENT-APPL-SN-591004 US-PATENT-CLASS-325-42 US-PATENT-3,508,152	N71-12390* #	c 07	NASA-CASE-XER-09213 US-PATENT-APPL-SN-668302 US-PATENT-CLASS-332-9 US-PATENT-3,535,657	N71-12540* #	c 09	NASA-CASE-XNP-01058 US-PATENT-APPL-SN-313136 US-PATENT-CLASS-315-160 US-PATENT-3,271,620
N71-11267* #	c 07	NASA-CASE-XNP-10843 US-PATENT-APPL-SN-649358 US-PATENT-CLASS-325-363 US-PATENT-3,508,156	N71-12391* #	c 07	NASA-CASE-XMS-05454-1 US-PATENT-APPL-SN-771803 US-PATENT-CLASS-343-17.7 US-PATENT-3,471,858	N71-12554* #	c 10	NASA-CASE-NPO-10348 US-PATENT-APPL-SN-704668 US-PATENT-CLASS-324-95 US-PATENT-3,532,979
N71-11281* #	c 07	NASA-CASE-XNP-10830 US-PATENT-APPL-SN-692332 US-PATENT-CLASS-178-69.5 US-PATENT-3,535,451	N71-12392* #	c 07	NASA-CASE-XGS-01590 US-PATENT-APPL-SN-584067 US-PATENT-CLASS-178-88 US-PATENT-3,491,202	N71-13410* #	c 01	NASA-CASE-XLA-00755 US-PATENT-APPL-SN-247423 US-PATENT-CLASS-244-35 US-PATENT-3,270,988
N71-11282* #	c 07	NASA-CASE-XGS-02889 US-PATENT-APPL-SN-685748 US-PATENT-CLASS-329-104 US-PATENT-3,501,704	N71-12396* #	c 07	NASA-CASE-GSC-10452 US-PATENT-APPL-SN-797794 US-PATENT-CLASS-343-776 US-PATENT-3,495,262	N71-13411* #	c 01	NASA-CASE-XLA-05828 US-PATENT-APPL-SN-509460 US-PATENT-CLASS-235-61.6 US-PATENT-3,500,020
N71-11284* #	c 07	NASA-CASE-XLA-01552 US-PATENT-APPL-SN-332339 US-PATENT-CLASS-325-65 US-PATENT-3,277,375	N71-12494* #	c 08	NASA-CASE-XGS-04767 US-PATENT-APPL-SN-645584 US-PATENT-CLASS-307-296 US-PATENT-3,535,560	N71-13421* #	c 02	NASA-CASE-XFR-00756 US-PATENT-APPL-SN-212173 US-PATENT-CLASS-235-150.22 US-PATENT-3,258,582
N71-11285* #	c 07	NASA-CASE-NPO-10539 US-PATENT-APPL-SN-743429 US-PATENT-CLASS-343-779 US-PATENT-3,534,375	N71-12500* #	c 08	NASA-CASE-XNP-07040 US-PATENT-APPL-SN-649357 US-PATENT-CLASS-332-31 US-PATENT-3,535,658	N71-13422* #	c 02	NASA-CASE-XLA-06339 US-PATENT-APPL-SN-801336 US-PATENT-CLASS-244-76 US-PATENT-3,534,930
N71-11298* #	c 07	NASA-CASE-XMF-01160 US-PATENT-APPL-SN-310507 US-PATENT-CLASS-340-198 US-PATENT-3,243,791	N71-12501* #	c 08	NASA-CASE-XLA-00670 US-PATENT-APPL-SN-235162 US-PATENT-CLASS-340-347 US-PATENT-3,251,053	N71-13461* #	c 06	NASA-CASE-LAR-10180-1 US-PATENT-APPL-SN-709398 US-PATENT-CLASS-250-41.9 US-PATENT-3,521,054
N71-11300* #	c 07	NASA-CASE-XMS-07168 US-PATENT-APPL-SN-769788 US-PATENT-CLASS-178-6.6 US-PATENT-3,493,677	N71-12502* #	c 08	NASA-CASE-NPO-10112 US-PATENT-APPL-SN-673226 US-PATENT-CLASS-340-172.5 US-PATENT-3,533,074	N71-13486* #	c 09	NASA-CASE-MFS-20333 US-PATENT-APPL-SN-820965 US-PATENT-CLASS-307-149 US-PATENT-3,535,543
N71-11766* #	c 21	NASA-CASE-LAR-10403 US-PATENT-APPL-SN-676391 US-PATENT-CLASS-343-6.5 US-PATENT-3,447,154	N71-12503* #	c 08	NASA-CASE-NPO-10351 US-PATENT-APPL-SN-712065 US-PATENT-CLASS-328-37 US-PATENT-3,535,642	N71-13518* #	c 09	NASA-CASE-MS-12178-1 US-PATENT-APPL-SN-845365 US-PATENT-CLASS-315-241 US-PATENT-3,530,336
N71-12217* #	c 01	NASA-CASE-FRC-10063 US-PATENT-APPL-SN-21263 US-PATENT-CLASS-178-6.6 US-PATENT-3,493,677	N71-12504* #	c 08	NASA-CASE-XMF-05835 US-PATENT-APPL-SN-627257 US-PATENT-CLASS-340-174 US-PATENT-3,493,942	N71-13521* #	c 09	NASA-CASE-XKS-09348 US-PATENT-APPL-SN-677505 US-PATENT-CLASS-343-703 US-PATENT-3,526,897
N71-12243* #	c 02	NASA-CASE-XLA-04451 US-PATENT-APPL-SN-457876 US-PATENT-CLASS-244-45 US-PATENT-3,310,262	N71-12505* #	c 08	NASA-CASE-XNP-05415 US-PATENT-APPL-SN-578932	N71-13522* #	c 09	NASA-CASE-LEW-10364-1 US-PATENT-APPL-SN-822518
N71-12255* #	c 03	NASA-CASE-NPO-10404 US-PATENT-APPL-SN-728234						

		US-PATENT-CLASS-317-258			US-PATENT-CLASS-350-3.5			US-PATENT-CLASS-60-35.6
N71-13530* #	c 09	NASA-CASE-XNP-00384	N71-15562* #	c 25	NASA-CASE-XLA-03374	N71-15625* #	c 33	NASA-CASE-XLE-01399
		US-PATENT-APPL-SN-180392			US-PATENT-APPL-SN-793770			US-PATENT-APPL-SN-320233
		US-PATENT-CLASS-324-132			US-PATENT-CLASS-315-111			US-PATENT-CLASS-13-26
N71-13531* #	c 09	US-PATENT-3,263,171	N71-15563* #	c 28	US-PATENT-3,535,586	N71-15634* #	c 27	US-PATENT-3,263,016
		NASA-CASE-MS-C-12033-1			NASA-CASE-XLA-02865			NASA-CASE-XLE-01988
		US-PATENT-APPL-SN-602828			US-PATENT-APPL-SN-416946			US-PATENT-APPL-SN-308918
		US-PATENT-CLASS-330-11			US-PATENT-CLASS-244-53			US-PATENT-CLASS-60-35.6
N71-13537* #	c 10	US-PATENT-3,526,845	N71-15565* #	c 16	US-PATENT-3,270,990	N71-15635* #	c 27	US-PATENT-3,258,912
		NASA-CASE-XNP-08274			NASA-CASE-MFS-20074			NASA-CASE-XLE-01182
		US-PATENT-APPL-SN-730703			US-PATENT-APPL-SN-801312			US-PATENT-APPL-SN-411949
		US-PATENT-CLASS-73-382			US-PATENT-CLASS-350-3.5			US-PATENT-CLASS-60-39.46
N71-13545* #	c 10	US-PATENT-3,520,190	N71-15566* #	c 31	US-PATENT-3,535,014	N71-15637* #	c 31	US-PATENT-3,258,918
		NASA-CASE-LAR-10774			NASA-CASE-XKS-08012-2			NASA-CASE-XLE-01640
		US-PATENT-APPL-SN-802820			US-PATENT-APPL-SN-874958			US-PATENT-APPL-SN-473535
		US-PATENT-CLASS-73-1			US-PATENT-CLASS-340-172.5			US-PATENT-CLASS-60-35.6
N71-13789* #	c 15	US-PATENT-3,534,584	N71-15567* #	c 16	US-PATENT-3,535,683	N71-15641* #	c 33	US-PATENT-3,270,504
		NASA-CASE-XLA-01141			NASA-CASE-ERC-10017			NASA-CASE-XNP-09802
		US-PATENT-APPL-SN-353632			US-PATENT-APPL-SN-677508			US-PATENT-APPL-SN-673229
		US-PATENT-CLASS-102-49			US-PATENT-CLASS-350-3.5			US-PATENT-CLASS-73-190
N71-13958* #	c 21	US-PATENT-3,263,610	N71-15568* #	c 33	US-PATENT-3,535,012	N71-15642* #	c 21	US-PATENT-3,531,989
		NASA-CASE-GSC-10087-2			NASA-CASE-XLE-09475-1			NASA-CASE-XGS-03431
		US-PATENT-APPL-SN-701744			US-PATENT-APPL-SN-710945			US-PATENT-APPL-SN-586635
		US-PATENT-CLASS-343-112			US-PATENT-CLASS-136-228			US-PATENT-CLASS-250-203
N71-14014* #	c 18	US-PATENT-3,495,260	N71-15571* #	c 15	US-PATENT-3,535,165	N71-15643* #	c 31	US-PATENT-3,488,504
		NASA-CASE-GSC-10072			NASA-CASE-XLA-07911			NASA-CASE-NPO-10311
		US-PATENT-APPL-SN-686296			US-PATENT-APPL-SN-660572			US-PATENT-APPL-SN-725475
		US-PATENT-CLASS-106-15			US-PATENT-CLASS-33-207			US-PATENT-CLASS-73-116
N71-14032* #	c 33	US-PATENT-3,493,401	N71-15582* #	c 21	US-PATENT-3,492,739	N71-15644* #	c 17	US-PATENT-3,534,597
		NASA-CASE-XLE-05913			NASA-CASE-XLA-01163			NASA-CASE-XLE-00726
		US-PATENT-APPL-SN-551933			US-PATENT-APPL-SN-405632			US-PATENT-APPL-SN-355126
		US-PATENT-CLASS-117-106			US-PATENT-CLASS-60-35.55			US-PATENT-CLASS-75-170
N71-14035* #	c 33	US-PATENT-3,490,939	N71-15583* #	c 21	US-PATENT-3,270,505	N71-15647* #	c 31	US-PATENT-3,271,140
		NASA-CASE-XLE-03307			NASA-CASE-XMF-01598			NASA-CASE-XGS-01143
		US-PATENT-APPL-SN-613979			US-PATENT-APPL-SN-333770			US-PATENT-APPL-SN-349781
		US-PATENT-CLASS-244-1			US-PATENT-CLASS-244-1			US-PATENT-CLASS-60-35.6
N71-14043* #	c 28	US-PATENT-3,490,718	N71-15597* #	c 15	US-PATENT-3,270,985	N71-15658* #	c 28	US-PATENT-3,270,501
		NASA-CASE-XLE-01124			NASA-CASE-XLE-08917			NASA-CASE-XLE-00409
		US-PATENT-APPL-SN-312269			US-PATENT-APPL-SN-662829			US-PATENT-APPL-SN-249539
		US-PATENT-CLASS-60-35.5			US-PATENT-CLASS-113-116			US-PATENT-CLASS-29-157
N71-14044* #	c 28	US-PATENT-3,238,715	N71-15598* #	c 14	US-PATENT-3,490,405	N71-15659* #	c 28	US-PATENT-3,254,395
		NASA-CASE-XGS-08729			NASA-CASE-XAC-00812			NASA-CASE-XLE-05689
		US-PATENT-APPL-SN-667637			US-PATENT-APPL-SN-255132			US-PATENT-APPL-SN-491845
		US-PATENT-CLASS-60-200			US-PATENT-CLASS-73-341			US-PATENT-CLASS-60-35.60
N71-14058* #	c 28	US-PATENT-3,490,235	N71-15599* #	c 14	US-PATENT-3,238,777	N71-15660* #	c 28	US-PATENT-3,254,487
		NASA-CASE-MS-C-12139-1			NASA-CASE-XNP-04161			NASA-CASE-XMF-00968
		US-PATENT-APPL-SN-797796			US-PATENT-APPL-SN-568356			US-PATENT-APPL-SN-339825
		US-PATENT-CLASS-103-37			US-PATENT-CLASS-250-83.3			US-PATENT-CLASS-60-35.6
N71-14090* #	c 27	US-PATENT-3,492,947	N71-15600* #	c 14	US-PATENT-3,444,375	N71-15661* #	c 28	US-PATENT-3,270,499
		NASA-CASE-LAR-10173-1			NASA-CASE-XKS-06250			NASA-CASE-XLE-02066
		US-PATENT-APPL-SN-758942			US-PATENT-APPL-SN-649075			US-PATENT-APPL-SN-426455
		US-PATENT-CLASS-149-19			US-PATENT-CLASS-73-97			US-PATENT-CLASS-60-35.5
N71-14132* #	c 21	US-PATENT-3,492,176	N71-15604* #	c 14	US-PATENT-3,492,862	N71-15663* #	c 31	US-PATENT-3,262,262
		NASA-CASE-XLA-05464			NASA-CASE-NPO-10337			NASA-CASE-XLA-00256
		US-PATENT-APPL-SN-656995			US-PATENT-APPL-SN-714296			US-PATENT-APPL-SN-333766
		US-PATENT-CLASS-244-1			US-PATENT-CLASS-350-58			US-PATENT-CLASS-244-1
N71-14159* #	c 21	US-PATENT-3,493,194	N71-15605* #	c 14	US-PATENT-3,488,103	N71-15664* #	c 31	US-PATENT-3,262,655
		NASA-CASE-XGS-04393			NASA-CASE-GSC-10062			NASA-CASE-XLA-01332
		US-PATENT-APPL-SN-700142			US-PATENT-APPL-SN-658955			US-PATENT-APPL-SN-250974
		US-PATENT-CLASS-244-1			US-PATENT-CLASS-350-285			US-PATENT-CLASS-220-15
N71-14354* #	c 26	US-PATENT-3,490,719	N71-15606* #	c 15	US-PATENT-3,493,294	N71-15673* #	c 23	US-PATENT-3,270,908
		NASA-CASE-ERC-10138			NASA-CASE-XNP-06031			NASA-CASE-XMS-01620
		US-PATENT-APPL-SN-821586			US-PATENT-APPL-SN-590144			US-PATENT-APPL-SN-357340
		US-PATENT-CLASS-225-2			US-PATENT-CLASS-250-52			US-PATENT-CLASS-248-358
N71-14932* #	c 15	US-PATENT-3,493,155	N71-15607* #	c 15	US-PATENT-3,493,746	N71-15674* #	c 31	US-PATENT-3,243,154
		NASA-CASE-LEW-11531			NASA-CASE-XMF-03287			NASA-CASE-XLA-03691
		US-PATENT-APPL-SN-643332			US-PATENT-APPL-SN-658956			US-PATENT-APPL-SN-667625
		US-PATENT-CLASS-219-72			US-PATENT-CLASS-228-7			US-PATENT-CLASS-244-1
N71-14996* #	c 14	US-PATENT-3,493,711	N71-15608* #	c 15	US-PATENT-3,443,732	N71-15675* #	c 31	US-PATENT-3,534,924
		NASA-CASE-XLA-00936			NASA-CASE-NPO-10117			NASA-CASE-XMF-03169
		US-PATENT-APPL-SN-282818			US-PATENT-APPL-SN-668238			US-PATENT-APPL-SN-375405
		US-PATENT-CLASS-73-170			US-PATENT-CLASS-138-42			US-PATENT-CLASS-89-1.5
N71-15467* #	c 23	US-PATENT-3,238,774	N71-15609* #	c 15	US-PATENT-3,493,012	N71-15676* #	c 31	US-PATENT-3,262,365
		NASA-CASE-XNP-03796			NASA-CASE-XMF-04709			NASA-CASE-XGS-05579
		US-PATENT-APPL-SN-453231			US-PATENT-APPL-SN-683507			US-PATENT-APPL-SN-719869
		US-PATENT-CLASS-62-6			US-PATENT-CLASS-137-81.5			US-PATENT-CLASS-244-1
N71-15468* #	c 17	US-PATENT-3,260,055	N71-15610* #	c 15	US-PATENT-3,493,003	N71-15687* #	c 31	US-PATENT-3,534,925
		NASA-CASE-LEW-10393-1			NASA-CASE-XLE-01604-2			NASA-CASE-XLA-05369
		US-PATENT-APPL-SN-644799			US-PATENT-APPL-SN-683613			US-PATENT-APPL-SN-765123
		US-PATENT-CLASS-75-202			US-PATENT-CLASS-117-50			US-PATENT-CLASS-102-49.5
N71-15469* #	c 18	US-PATENT-3,535,110	N71-15620* #	c 14	US-PATENT-3,493,415	N71-15688* #	c 18	US-PATENT-3,534,686
		NASA-CASE-ARC-10099-1			NASA-CASE-XLA-01926			NASA-CASE-XNP-03459-2
		US-PATENT-APPL-SN-704224			US-PATENT-APPL-SN-784521			US-PATENT-APPL-SN-681942
		US-PATENT-CLASS-106-15			US-PATENT-CLASS-340-57			US-PATENT-CLASS-260-404.5
N71-15545* #	c 18	US-PATENT-3,535,130	N71-15621* #	c 14	US-PATENT-3,491,335	N71-15689* #	c 31	US-PATENT-3,535,352
		NASA-CASE-XMS-09691-1			NASA-CASE-XNP-09572			NASA-CASE-MFS-14685
		US-PATENT-APPL-SN-738119			US-PATENT-APPL-SN-660841			US-PATENT-APPL-SN-752947
		US-PATENT-CLASS-8-94.12			US-PATENT-CLASS-35-10.2			US-PATENT-CLASS-180-118
N71-15550* #	c 16	US-PATENT-3,526,473	N71-15622* #	c 14	US-PATENT-3,493,665	N71-15692* #	c 31	US-PATENT-CLASS-180-121
		NASA-CASE-XNP-05219			NASA-CASE-XNP-04111			US-PATENT-3,534,826
		US-PATENT-APPL-SN-336103			US-PATENT-APPL-SN-560969			NASA-CASE-XLA-01339
		US-PATENT-CLASS-330-4			US-PATENT-CLASS-350-213			US-PATENT-APPL-SN-373591
N71-15551* #	c 16	US-PATENT-3,299,364	N71-15623* #	c 33	US-PATENT-3,493,291			US-PATENT-CLASS-102-49
		NASA-CASE-ERC-10019			NASA-CASE-XMS-01816	N71-15871* #	c 15	US-PATENT-3,260,204
		US-PATENT-APPL-SN-677508			US-PATENT-APPL-SN-425364			NASA-CASE-XMF-02039

		US-PATENT-APPL-SN-434143			US-PATENT-APPL-SN-304749			US-PATENT-APPL-SN-701732
		US-PATENT-CLASS-219-131			US-PATENT-CLASS-35-29			US-PATENT-CLASS-250-41-9
		US-PATENT-3,271,558			US-PATENT-3,270,441			US-PATENT-3,532,880
N71-15906*	c 15	NASA-CASE-XNP-00920	N71-16030*	c 10	NASA-CASE-XMF-01096	N71-16098*	c 23	NASA-CASE-XAC-03107
		US-PATENT-APPL-SN-329331			US-PATENT-APPL-SN-307270			US-PATENT-APPL-SN-538168
		US-PATENT-CLASS-62-2			US-PATENT-CLASS-318-376			US-PATENT-CLASS-73-505
		US-PATENT-3,270,512			US-PATENT-3,271,649			US-PATENT-3,455,171
N71-15907*	c 07	NASA-CASE-XNP-01057	N71-16031*	c 12	NASA-CASE-XMS-01445	N71-16099*	c 23	NASA-CASE-XGS-07514
		US-PATENT-APPL-SN-301683			US-PATENT-APPL-SN-385526			US-PATENT-APPL-SN-640453
		US-PATENT-CLASS-343-786			US-PATENT-CLASS-137-615			US-PATENT-CLASS-328-1
		US-PATENT-3,305,870			US-PATENT-3,308,848			US-PATENT-3,509,469
N71-15908*	c 08	NASA-CASE-XLA-02705	N71-16037*	c 26	NASA-CASE-XGS-05718	N71-16100*	c 23	NASA-CASE-XGS-05715
		US-PATENT-APPL-SN-473537			US-PATENT-APPL-SN-584071			US-PATENT-APPL-SN-668257
		US-PATENT-CLASS-129-16.7			US-PATENT-CLASS-29-472.9			US-PATENT-CLASS-250-233
		US-PATENT-3,310,054			US-PATENT-3,452,423			US-PATENT-3,532,894
N71-15909*	c 10	NASA-CASE-XAC-03777	N71-16042*	c 10	NASA-CASE-XAC-00942	N71-16101*	c 23	NASA-CASE-XNP-08883
		US-PATENT-APPL-SN-484489			US-PATENT-APPL-SN-310506			US-PATENT-APPL-SN-617021
		US-PATENT-CLASS-200-6			US-PATENT-CLASS-307-88.5			US-PATENT-CLASS-356-117
		US-PATENT-3,283,088			US-PATENT-3,277,314			US-PATENT-3,520,617
N71-15910*	c 10	NASA-CASE-XGS-00823	N71-16044*	c 17	NASA-CASE-XGS-06306	N71-16102*	c 31	NASA-CASE-XGS-09190
		US-PATENT-APPL-SN-336607			US-PATENT-APPL-SN-685473			US-PATENT-APPL-SN-647298
		US-PATENT-CLASS-307-88.5			US-PATENT-CLASS-156-3			US-PATENT-CLASS-343-915
		US-PATENT-3,283,175			US-PATENT-3,532,568			US-PATENT-3,521,290
N71-15918*	c 15	NASA-CASE-XMS-02383	N71-16046*	c 18	NASA-CASE-GSC-10007	N71-16103*	c 32	NASA-CASE-LAR-10317-1
		US-PATENT-APPL-SN-299042			US-PATENT-APPL-SN-627599			US-PATENT-APPL-SN-739927
		US-PATENT-CLASS-140-123			US-PATENT-CLASS-117-201			US-PATENT-CLASS-137-582
		US-PATENT-3,299,913			US-PATENT-3,532,538			US-PATENT-3,508,578
N71-15922*	c 15	NASA-CASE-XGS-01971	N71-16052*	c 15	NASA-CASE-XLE-02999	N71-16104*	c 33	NASA-CASE-XLE-00785
		US-PATENT-APPL-SN-353645			US-PATENT-APPL-SN-431235			US-PATENT-APPL-SN-666554
		US-PATENT-CLASS-85-33			US-PATENT-CLASS-29-148.4			US-PATENT-CLASS-60-108
		US-PATENT-3,262,351			US-PATENT-3,262,186			US-PATENT-3,508,402
N71-15925*	c 11	NASA-CASE-XLA-00378	N71-16057*	c 10	NASA-CASE-XNP-01193	N71-16105*	c 18	NASA-CASE-XLE-08511-2
		US-PATENT-APPL-SN-266107			US-PATENT-APPL-SN-366226			US-PATENT-APPL-SN-711921
		US-PATENT-CLASS-219-10.49			US-PATENT-CLASS-324-57			US-PATENT-CLASS-117-119
		US-PATENT-3,238,345			US-PATENT-3,277,366			US-PATENT-3,508,955
N71-15926*	c 11	NASA-CASE-XLA-00939	N71-16058*	c 10	NASA-CASE-XMF-01097	N71-16106*	c 32	NASA-CASE-XLA-04605
		US-PATENT-APPL-SN-309354			US-PATENT-APPL-SN-290873			US-PATENT-APPL-SN-619519
		US-PATENT-CLASS-73-147			US-PATENT-CLASS-340-227			US-PATENT-CLASS-137-582
		US-PATENT-3,276,251			US-PATENT-3,277,458			US-PATENT-3,443,584
N71-15960*	c 11	NASA-CASE-XAC-00731	N71-16073*	c 25	NASA-CASE-XAC-05695	N71-16124*	c 18	NASA-CASE-XMF-05279
		US-PATENT-APPL-SN-232318			US-PATENT-APPL-SN-634038			US-PATENT-APPL-SN-617774
		US-PATENT-CLASS-220-89			US-PATENT-CLASS-324-34			US-PATENT-CLASS-106-88
		US-PATENT-3,145,874			US-PATENT-3,517,302			US-PATENT-3,508,940
N71-15962*	c 14	NASA-CASE-XGS-01587	N71-16075*	c 15	NASA-CASE-XLA-00284	N71-16210*	c 18	NASA-CASE-XNP-08837
		US-PATENT-APPL-SN-298799			US-PATENT-APPL-SN-240760			US-PATENT-APPL-SN-691736
		US-PATENT-CLASS-324-43			US-PATENT-CLASS-117-69			US-PATENT-CLASS-204-20
		US-PATENT-3,258,687			US-PATENT-3,264,135			US-PATENT-3,526,580
N71-15966*	c 15	NASA-CASE-XLE-00953	N71-16076*	c 15	NASA-CASE-XLE-00106	N71-16212*	c 23	NASA-CASE-NPO-10250
		US-PATENT-APPL-SN-336320			US-PATENT-APPL-SN-629759			US-PATENT-APPL-SN-736848
		US-PATENT-CLASS-22-200			US-PATENT-CLASS-25-156			US-PATENT-CLASS-149-1
		US-PATENT-3,237,253			US-PATENT-2,944,316			US-PATENT-3,516,879
N71-15967*	c 15	NASA-CASE-XLE-00703	N71-16077*	c 15	NASA-CASE-XLA-00302	N71-16213*	c 24	NASA-CASE-XGS-06628
		US-PATENT-APPL-SN-271822			US-PATENT-APPL-SN-284266			US-PATENT-APPL-SN-665680
		US-PATENT-CLASS-137-13			US-PATENT-CLASS-117-46			US-PATENT-CLASS-315-111
		US-PATENT-3,270,756			US-PATENT-3,271,181			US-PATENT-3,509,419
N71-15968*	c 15	NASA-CASE-XLE-00586	N71-16078*	c 15	NASA-CASE-XGS-00824	N71-16221*	c 31	NASA-CASE-XLA-05906
		US-PATENT-APPL-SN-317391			US-PATENT-APPL-SN-379072			US-PATENT-APPL-SN-777766
		US-PATENT-CLASS-55-160			US-PATENT-CLASS-89-1			US-PATENT-CLASS-73-432
		US-PATENT-3,257,780			US-PATENT-3,309,961			US-PATENT-3,526,139
N71-15969*	c 14	NASA-CASE-XMF-01099	N71-16079*	c 15	NASA-CASE-XLA-00415	N71-16222*	c 31	NASA-CASE-MFS-11133
		US-PATENT-APPL-SN-73367			US-PATENT-APPL-SN-314074			US-PATENT-APPL-SN-693419
		US-PATENT-CLASS-73-517			US-PATENT-CLASS-233-11			US-PATENT-CLASS-244-1
		US-PATENT-3,261,210			US-PATENT-3,276,679			US-PATENT-3,508,723
N71-15974*	c 32	NASA-CASE-XMS-06782	N71-16080*	c 31	NASA-CASE-MSC-12049	N71-16223*	c 27	NASA-CASE-MFS-12750
		US-PATENT-APPL-SN-691739			US-PATENT-APPL-SN-693420			US-PATENT-APPL-SN-806149
		US-PATENT-CLASS-338-5			US-PATENT-CLASS-52-3			US-PATENT-CLASS-73-432
		US-PATENT-3,464,049			US-PATENT-3,465,482			US-PATENT-3,526,140
N71-15978*	c 23	NASA-CASE-XGS-00373	N71-16081*	c 31	NASA-CASE-XGS-03351	N71-16224*	c 28	NASA-CASE-MFS-11497
		US-PATENT-APPL-SN-105518			US-PATENT-APPL-SN-472747			US-PATENT-APPL-SN-730733
		US-PATENT-CLASS-161-189			US-PATENT-CLASS-244-31			US-PATENT-CLASS-239-265.43
		US-PATENT-3,276,946			US-PATENT-3,276,726			US-PATENT-3,526,365
N71-15986*	c 15	NASA-CASE-XMF-03498	N71-16085*	c 31	NASA-CASE-XLA-09881	N71-16277*	c 33	NASA-CASE-XMS-04268
		US-PATENT-APPL-SN-396443			US-PATENT-APPL-SN-710562			US-PATENT-APPL-SN-516160
		US-PATENT-CLASS-29-155.55			US-PATENT-CLASS-244-138			US-PATENT-CLASS-165-133
		US-PATENT-3,258,831			US-PATENT-3,520,503			US-PATENT-3,502,141
N71-15990*	c 30	NASA-CASE-XAC-08494	N71-16086*	c 09	NASA-CASE-XLE-02038	N71-16278*	c 33	NASA-CASE-XMF-04237
		US-PATENT-APPL-SN-690998			US-PATENT-APPL-SN-349782			US-PATENT-APPL-SN-539237
		US-PATENT-CLASS-356-74			US-PATENT-CLASS-73-147			US-PATENT-CLASS-219-364
		US-PATENT-3,532,428			US-PATENT-3,273,388			US-PATENT-3,517,162
N71-15992*	c 14	NASA-CASE-XGS-01052	N71-16087*	c 02	NASA-CASE-XAC-02058	N71-16281*	c 20	NASA-CASE-XLA-02081
		US-PATENT-APPL-SN-314572			US-PATENT-APPL-SN-342572			US-PATENT-APPL-SN-522795
		US-PATENT-CLASS-73-15			US-PATENT-CLASS-244-1			US-PATENT-CLASS-73-189
		US-PATENT-3,242,716			US-PATENT-3,276,722			US-PATENT-3,507,150
N71-16014*	c 14	NASA-CASE-XLE-00820	N71-16088*	c 07	NASA-CASE-XGS-01022	N71-16340*	c 20	NASA-CASE-XMF-14032
		US-PATENT-APPL-SN-228569			US-PATENT-APPL-SN-331323			US-PATENT-APPL-SN-679862
		US-PATENT-CLASS-324-32			US-PATENT-CLASS-325-4			US-PATENT-CLASS-250-209
		US-PATENT-3,283,241			US-PATENT-3,277,373			US-PATENT-3,501,641
N71-16025* #	c 17	NASA-CASE-XLE-02991	N71-16089*	c 09	NASA-CASE-XAC-02405	N71-16341*	c 23	NASA-CASE-XGS-05291
		US-PATENT-APPL-SN-375401			US-PATENT-APPL-SN-433821			US-PATENT-APPL-SN-553891
		US-PATENT-CLASS-75-170			US-PATENT-CLASS-200-6			US-PATENT-CLASS-356-209
		US-PATENT-3,276,865			US-PATENT-3,271,532			US-PATENT-3,504,983
N71-16026*	c 17	NASA-CASE-XLE-02082	N71-16090*	c 30	NASA-CASE-GSC-10083-1	N71-16345*	c 31	NASA-CASE-XMF-05344
		US-PATENT-APPL-SN-360180			US-PATENT-APPL-SN-641431			US-PATENT-APPL-SN-702396
		US-PATENT-CLASS-75-171			US-PATENT-CLASS-343-6			US-PATENT-CLASS-244-1
		US-PATENT-3,276,866			US-PATENT-3,471,856			US-PATENT-3,520,496
N71-16028*	c 11	NASA-CASE-XLA-01787	N71-16095*	c 24	NASA-CASE-XAC-05506-1	N71-16346*	c 31	NASA-CASE-XMS-03613

		US-PATENT-APPL-SN-802816				US-PATENT-APPL-SN-270118	N71-17685*	c 15	NASA-CASE-NPO-10034
		US-PATENT-CLASS-244-1				US-PATENT-CLASS-230-162			US-PATENT-APPL-SN-668241
		US-PATENT-3,526,372				US-PATENT-3,309,012			US-PATENT-CLASS-339-17
N71-16348*	c 27	NASA-CASE-MSC-12280	N71-17626*	c 14	NASA-CASE-LAR-10274-1	N71-17686*	c 15	NASA-CASE-MFS-20586	
		US-PATENT-APPL-SN-372648			US-PATENT-APPL-SN-717052			US-PATENT-APPL-SN-688868	
		US-PATENT-CLASS-250-43.5			US-PATENT-CLASS-188-1			US-PATENT-CLASS-29-428	
N71-16355*	c 23	US-PATENT-3,501,832	N71-17627*	c 14	US-PATENT-3,491,857			US-PATENT-3,526,030	
		NASA-CASE-XGS-05534			NASA-CASE-XGS-03532	N71-17687*	c 15	NASA-CASE-XLA-04143	
		US-PATENT-APPL-SN-578925			US-PATENT-APPL-SN-538913			US-PATENT-APPL-SN-628246	
		US-PATENT-CLASS-23-253			US-PATENT-CLASS-356-106			US-PATENT-CLASS-156-510	
N71-16356*	c 33	US-PATENT-3,520,660	N71-17628*	c 15	US-PATENT-3,488,123	N71-17688*	c 15	US-PATENT-3,508,999	
		NASA-CASE-NPO-10158			NASA-CASE-MFS-10340			NASA-CASE-XLE-09527	
		US-PATENT-APPL-SN-730702			US-PATENT-APPL-SN-716734			US-PATENT-APPL-SN-686344	
		US-PATENT-CLASS-73-343			US-PATENT-CLASS-225-1			US-PATENT-CLASS-29-148.4	
N71-16357*	c 33	US-PATENT-3,526,134	N71-17629*	c 31	US-PATENT-3,507,425			US-PATENT-3,500,525	
		NASA-CASE-NPO-10138			NASA-CASE-XLE-03583	N71-17691*	c 31	NASA-CASE-XLA-00937	
		US-PATENT-APPL-SN-759457			US-PATENT-APPL-SN-400617			US-PATENT-APPL-SN-393461	
		US-PATENT-CLASS-236-1			US-PATENT-CLASS-244-3.22			US-PATENT-CLASS-244-3.14	
N71-16365*	c 23	US-PATENT-3,526,359	N71-17631*	c 12	US-PATENT-3,276,376	N71-17692*	c 15	US-PATENT-3,310,258	
		NASA-CASE-XNP-08840			US-PATENT-APPL-SN-710949			NASA-CASE-MFS-14772	
		US-PATENT-APPL-SN-649380			US-PATENT-CLASS-60-217			US-PATENT-APPL-SN-774151	
		US-PATENT-CLASS-356-36			US-PATENT-3,534,555			US-PATENT-CLASS-74-63	
N71-16392*	c 27	US-PATENT-3,526,460	N71-17645*	c 32	NASA-CASE-XNP-01153	N71-17693*	c 15	US-PATENT-3,529,480	
		NASA-CASE-XNP-09744			US-PATENT-APPL-SN-336608			NASA-CASE-NPO-10064	
		US-PATENT-APPL-SN-685750			US-PATENT-CLASS-73-88			US-PATENT-APPL-SN-668755	
		US-PATENT-CLASS-60-39.47			US-PATENT-3,273,381			US-PATENT-CLASS-244-1	
N71-16393*	c 17	US-PATENT-3,507,114	N71-17647*	c 15	NASA-CASE-XMF-01687			US-PATENT-3,501,112	
		NASA-CASE-NPO-10271			US-PATENT-APPL-SN-577115	N71-17694*	c 15	NASA-CASE-XNP-08897	
		US-PATENT-APPL-SN-763869			US-PATENT-CLASS-118-11			US-PATENT-APPL-SN-640450	
		US-PATENT-CLASS-21-207			US-PATENT-3,502,051			US-PATENT-CLASS-318-22	
N71-16428*	c 32	US-PATENT-3,529,928	N71-17648*	c 15	NASA-CASE-MSC-12116-1	N71-17696*	c 15	US-PATENT-3,501,683	
		NASA-CASE-XLA-03135			US-PATENT-APPL-SN-768336			NASA-CASE-XLA-05100	
		US-PATENT-APPL-SN-582171			US-PATENT-CLASS-251-358			US-PATENT-APPL-SN-724551	
		US-PATENT-CLASS-73-71.4			US-PATENT-3,508,739			US-PATENT-CLASS-73-103	
N71-16894*	c 12	US-PATENT-3,503,251	N71-17649*	c 15	NASA-CASE-MFS-11132			US-PATENT-3,487,680	
		NASA-CASE-XLA-02079			US-PATENT-APPL-SN-744910	N71-17701*	c 14	NASA-CASE-NPO-10144	
		US-PATENT-APPL-SN-435756			US-PATENT-CLASS-248-360			US-PATENT-APPL-SN-688805	
		US-PATENT-CLASS-188-87			US-PATENT-3,526,382			US-PATENT-CLASS-73-29	
N71-17569*	c 12	US-PATENT-3,310,138	N71-17650*	c 15	NASA-CASE-XMF-05114			US-PATENT-3,534,585	
		NASA-CASE-MSC-12084-1			US-PATENT-APPL-SN-637882	N71-17705*	c 06	NASA-CASE-XGS-05532	
		US-PATENT-APPL-SN-762438			US-PATENT-CLASS-29-517			US-PATENT-APPL-SN-570093	
		US-PATENT-CLASS-73-204			US-PATENT-3,507,034			US-PATENT-CLASS-195-99	
N71-17573*	c 12	US-PATENT-3,500,686	N71-17651*	c 15	NASA-CASE-XLE-03803-2			US-PATENT-3,423,290	
		NASA-CASE-LAR-10323-1			US-PATENT-APPL-SN-669336	N71-17729*	c 31	NASA-CASE-XAC-01591	
		US-PATENT-APPL-SN-738314			US-PATENT-CLASS-156-172			US-PATENT-APPL-SN-385527	
		US-PATENT-CLASS-73-45.5			US-PATENT-3,535,179			US-PATENT-CLASS-244-1	
N71-17574*	c 14	US-PATENT-3,516,284	N71-17652*	c 15	NASA-CASE-XLE-05079			US-PATENT-3,282,532	
		NASA-CASE-XGS-04993			US-PATENT-APPL-SN-601228	N71-17730*	c 31	NASA-CASE-XMF-01543	
		US-PATENT-APPL-SN-577775			US-PATENT-CLASS-310-93			US-PATENT-APPL-SN-402365	
		US-PATENT-CLASS-96-49			US-PATENT-3,493,797			US-PATENT-CLASS-102-49	
N71-17575*	c 14	US-PATENT-3,458,313	N71-17653*	c 15	NASA-CASE-ARC-10140-1			US-PATENT-3,286,829	
		NASA-CASE-XMF-06531			US-PATENT-APPL-SN-783379	N71-17788*	c 30	NASA-CASE-XGS-00783	
		US-PATENT-APPL-SN-732917			US-PATENT-CLASS-24-211			US-PATENT-APPL-SN-372438	
		US-PATENT-CLASS-204-195			US-PATENT-CLASS-85-3			US-PATENT-CLASS-73-432	
N71-17576*	c 12	US-PATENT-3,509,034			US-PATENT-3,534,650			US-PATENT-3,286,531	
		NASA-CASE-MFS-10412	N71-17654*	c 15	NASA-CASE-XNP-09702	N71-17802*	c 23	NASA-CASE-XLE-00454	
		US-PATENT-APPL-SN-701835			US-PATENT-APPL-SN-730734			US-PATENT-APPL-SN-295855	
		US-PATENT-CLASS-137-81.5			US-PATENT-CLASS-239-416			US-PATENT-CLASS-73-295	
N71-17579*	c 12	US-PATENT-3,520,317			US-PATENT-3,534,909			US-PATENT-3,273,392	
		NASA-CASE-XLA-07391	N71-17655*	c 14	NASA-CASE-NPO-10320	N71-17803*	c 15	NASA-CASE-XMS-05516	
		US-PATENT-APPL-SN-726898			US-PATENT-APPL-SN-718689			US-PATENT-APPL-SN-563648	
		US-PATENT-CLASS-137-81.5			US-PATENT-CLASS-356-106			US-PATENT-CLASS-264-92	
		US-PATENT-3,493,004			US-PATENT-3,535,041			US-PATENT-3,488,414	
N71-17584*	c 14	NASA-CASE-XNP-09462	N71-17656*	c 14	NASA-CASE-MFS-12827	N71-17805*	c 15	NASA-CASE-MFS-12805	
		US-PATENT-APPL-SN-658957			US-PATENT-APPL-SN-742816			US-PATENT-APPL-SN-758082	
		US-PATENT-CLASS-73-57			US-PATENT-CLASS-73-88.5			US-PATENT-CLASS-192-43.1	
N71-17585*	c 14	US-PATENT-3,500,677			US-PATENT-3,534,592			US-PATENT-CLASS-81-63.1	
		NASA-CASE-XGS-05680	N71-17657*	c 14	NASA-CASE-XNP-09205			US-PATENT-3,534,836	
		US-PATENT-APPL-SN-656953			US-PATENT-APPL-SN-768473	N71-17818*	c 26	NASA-CASE-XMF-01016	
		US-PATENT-CLASS-318-138			US-PATENT-CLASS-33-149			US-PATENT-APPL-SN-326299	
N71-17586*	c 14	US-PATENT-3,501,664			US-PATENT-3,534,479			US-PATENT-CLASS-264-27	
		NASA-CASE-XLA-08646	N71-17658*	c 14	NASA-CASE-XMF-04966			US-PATENT-3,274,304	
		US-PATENT-APPL-SN-677476			US-PATENT-APPL-SN-727480	N71-17822*	c 15	NASA-CASE-ARC-10009-1	
		US-PATENT-CLASS-73-105			US-PATENT-CLASS-33-174			US-PATENT-APPL-SN-714595	
N71-17587*	c 14	US-PATENT-3,534,596			US-PATENT-3,534,480			US-PATENT-CLASS-324-58.5	
		NASA-CASE-XMF-05844	N71-17659*	c 14	NASA-CASE-XMF-02964			US-PATENT-3,532,973	
		US-PATENT-APPL-SN-706564			US-PATENT-APPL-SN-493942	N71-17897*	c 33	NASA-CASE-XLA-00892	
		US-PATENT-CLASS-73-382			US-PATENT-CLASS-73-15.4			US-PATENT-APPL-SN-245941	
N71-17588*	c 14	US-PATENT-3,500,688			US-PATENT-3,465,569			US-PATENT-CLASS-62-467	
		NASA-CASE-MFS-12806	N71-17661*	c 12	NASA-CASE-NPO-10298			US-PATENT-3,273,355	
		US-PATENT-APPL-SN-686933			US-PATENT-APPL-SN-745852	N71-18064*	c 26	NASA-CASE-XNP-01328	
		US-PATENT-CLASS-55-179			US-PATENT-CLASS-137-341			US-PATENT-APPL-SN-296879	
N71-17599*	c 05	US-PATENT-3,490,205			US-PATENT-3,534,765			US-PATENT-CLASS-317-234	
		NASA-CASE-MSC-12206-1	N71-17662*	c 14	NASA-CASE-NPO-10300			US-PATENT-3,271,637	
		US-PATENT-APPL-SN-856258			US-PATENT-APPL-SN-718769	N71-18132*	c 15	NASA-CASE-MFS-13686	
		US-PATENT-CLASS-128-142.5			US-PATENT-CLASS-350-285			US-PATENT-APPL-SN-716183	
N71-17600*	c 11	US-PATENT-3,516,404			US-PATENT-3,535,024			US-PATENT-CLASS-73-67.2	
		NASA-CASE-MFS-12915	N71-17679*	c 31	NASA-CASE-XNP-02507			US-PATENT-3,531,982	
		US-PATENT-APPL-SN-694340			US-PATENT-APPL-SN-475299	N71-18465*	c 14	NASA-CASE-NPO-10174	
		US-PATENT-CLASS-220-89			US-PATENT-CLASS-244-1			US-PATENT-APPL-SN-690163	
N71-17609*	c 32	US-PATENT-3,469,734			US-PATENT-3,310,256			US-PATENT-CLASS-95-11	
		NASA-CASE-XLA-02332	N71-17680*	c 31	NASA-CASE-XLA-00117			US-PATENT-3,520,238	
		US-PATENT-APPL-SN-388024			US-PATENT-APPL-SN-835153	N71-18481*	c 14	NASA-CASE-XLA-02758	
		US-PATENT-CLASS-212-11			US-PATENT-CLASS-220-1			US-PATENT-APPL-SN-759665	
N71-17610*	c 33	US-PATENT-3,276,602			US-PATENT-2,996,212			US-PATENT-CLASS-73-4	
		NASA-CASE-XLA-00377							

		US-PATENT-3,531,978			US-PATENT-3,507,706			US-PATENT-3,517,318
N71-18482*	c 14	NASA-CASE-XLA-07424	N71-18699*	c 14	NASA-CASE-XLA-03273	N71-19433*	c 07	NASA-CASE-MFS-13046
		US-PATENT-APPL-SN-635326			US-PATENT-APPL-SN-487352			US-PATENT-APPL-SN-673228
		US-PATENT-CLASS-313-7			US-PATENT-CLASS-250-83.3			US-PATENT-CLASS-178-6
		US-PATENT-3,466,484			US-PATENT-3,458,702			US-PATENT-3,532,807
N71-18483*	c 14	NASA-CASE-XER-09519	N71-18701*	c 15	NASA-CASE-XMF-07587	N71-19435*	c 08	NASA-CASE-XGS-02612
		US-PATENT-APPL-SN-676375			US-PATENT-APPL-SN-649359			US-PATENT-APPL-SN-502743
		US-PATENT-CLASS-55-208			US-PATENT-CLASS-317-122			US-PATENT-CLASS-340-347
		US-PATENT-3,469,375			US-PATENT-3,448,346			US-PATENT-3,509,558
N71-18578*	c 11	NASA-CASE-XAC-05902	N71-18720*	c 09	NASA-CASE-MS-12101	N71-19436*	c 07	NASA-CASE-XMF-09422
		US-PATENT-APPL-SN-662828			US-PATENT-APPL-SN-763705			US-PATENT-APPL-SN-783378
		US-PATENT-CLASS-89-8			US-PATENT-CLASS-343-718			US-PATENT-CLASS-174-35
		US-PATENT-3,465,638			US-PATENT-3,509,570			US-PATENT-3,517,109
N71-18579*	c 15	NASA-CASE-XGS-04175	N71-18721*	c 09	NASA-CASE-XER-07894	N71-19437*	c 08	NASA-CASE-XGS-04768
		US-PATENT-APPL-SN-606464			US-PATENT-APPL-SN-644444			US-PATENT-APPL-SN-598119
		US-PATENT-CLASS-72-364			US-PATENT-CLASS-331-107			US-PATENT-CLASS-235-158
		US-PATENT-3,465,567			US-PATENT-3,509,491			US-PATENT-3,508,039
N71-18580*	c 15	NASA-CASE-XNP-09698	N71-18722*	c 10	NASA-CASE-ERC-10046	N71-19438*	c 03	NASA-CASE-XGS-05432
		US-PATENT-APPL-SN-698592			US-PATENT-APPL-SN-793772			US-PATENT-APPL-SN-549860
		US-PATENT-CLASS-138-4			US-PATENT-CLASS-343-100			US-PATENT-CLASS-320-23
		US-PATENT-CLASS-138-45			US-PATENT-3,501,764			US-PATENT-3,426,263
		US-PATENT-CLASS-251-118	N71-18723*	c 10	NASA-CASE-XNP-09450	N71-19439*	c 05	NASA-CASE-XMS-09571
		US-PATENT-CLASS-251-121			US-PATENT-APPL-SN-640459			US-PATENT-APPL-SN-678700
		US-PATENT-3,532,128			US-PATENT-CLASS-307-273			US-PATENT-CLASS-165-46
N71-18594*	c 08	NASA-CASE-XAC-04031			US-PATENT-3,501,649			US-PATENT-3,425,487
		US-PATENT-APPL-SN-538905	N71-18724*	c 10	NASA-CASE-XLA-09377	N71-19440*	c 05	NASA-CASE-XMS-01137
		US-PATENT-CLASS-340-347			US-PATENT-APPL-SN-568160			US-PATENT-APPL-SN-516150
		US-PATENT-3,533,098			US-PATENT-CLASS-318-257			US-PATENT-CLASS-250-83
N71-18595*	c 08	NASA-CASE-XGS-03303			US-PATENT-3,504,258			US-PATENT-3,427,454
		US-PATENT-APPL-SN-520838	N71-18751* #	c 08	NASA-CASE-XLA-07732	N71-19449*	c 09	NASA-CASE-XFR-03107
		US-PATENT-CLASS-340-174			US-PATENT-APPL-SN-641441			US-PATENT-APPL-SN-507257
		US-PATENT-3,501,752			US-PATENT-CLASS-307-216			US-PATENT-CLASS-178-6
N71-18598*	c 09	NASA-CASE-NPO-10066			US-PATENT-3,512,009			US-PATENT-3,458,651
		US-PATENT-APPL-SN-681693	N71-18752*	c 08	NASA-CASE-XMF-00663	N71-19466*	c 09	NASA-CASE-XGS-02812
		US-PATENT-CLASS-343-13			US-PATENT-APPL-SN-205470			US-PATENT-APPL-SN-502750
		US-PATENT-3,447,155			US-PATENT-CLASS-321-5			US-PATENT-CLASS-330-30
N71-18599*	c 09	NASA-CASE-LAR-10372			US-PATENT-3,521,143			US-PATENT-3,466,560
		US-PATENT-APPL-SN-730162	N71-18772*	c 10	NASA-CASE-GSC-10366-1	N71-19467*	c 10	NASA-CASE-XMF-08665
		US-PATENT-CLASS-102-70.2			US-PATENT-APPL-SN-771523			US-PATENT-APPL-SN-582609
		US-PATENT-3,500,747			US-PATENT-CLASS-318-138			US-PATENT-CLASS-325-63
N71-18600*	c 09	NASA-CASE-MS-12168-1			US-PATENT-3,532,948			US-PATENT-3,470,475
		US-PATENT-APPL-SN-640154	N71-18773*	c 11	NASA-CASE-XMF-07488	N71-19468*	c 10	NASA-CASE-XMS-05605-1
		US-PATENT-CLASS-312-296			US-PATENT-APPL-SN-707495			US-PATENT-APPL-SN-764812
		US-PATENT-3,447,850			US-PATENT-CLASS-35-12			US-PATENT-CLASS-178-69.5
N71-18602*	c 08	NASA-CASE-XGS-04766			US-PATENT-3,534,485			US-PATENT-3,532,819
		US-PATENT-APPL-SN-598120	N71-18830*	c 09	NASA-CASE-XAC-10768	N71-19469*	c 10	NASA-CASE-XNP-00777
		US-PATENT-CLASS-235-175			US-PATENT-APPL-SN-711970			US-PATENT-APPL-SN-486573
		US-PATENT-3,532,866			US-PATENT-CLASS-250-83			US-PATENT-CLASS-329-122
N71-18603*	c 12	NASA-CASE-ERC-10031			US-PATENT-3,508,053			US-PATENT-3,517,268
		US-PATENT-APPL-SN-741461	N71-18843*	c 09	NASA-CASE-XNP-03263	N71-19470*	c 09	NASA-CASE-XGS-05289
		US-PATENT-CLASS-40-28			US-PATENT-APPL-SN-506908			US-PATENT-APPL-SN-632104
		US-PATENT-3,516,185			US-PATENT-CLASS-340-146.1			US-PATENT-CLASS-331-113
N71-18611*	c 31	NASA-CASE-MFS-20400			US-PATENT-3,501,743			US-PATENT-3,470,496
		US-PATENT-APPL-SN-551694	N71-19212*	c 21	NASA-CASE-MFS-20386	N71-19471*	c 10	NASA-CASE-XLE-03804
		US-PATENT-CLASS-152-11			US-PATENT-APPL-SN-818349			US-PATENT-APPL-SN-526631
		US-PATENT-3,493,027			US-PATENT-CLASS-356-28			US-PATENT-CLASS-307-235
N71-18613* #	c 15	NASA-CASE-XNP-02588			US-PATENT-3,532,427			US-PATENT-3,463,939
		US-PATENT-APPL-SN-563644	N71-19213*	c 15	NASA-CASE-MFS-14259	N71-19472*	c 10	NASA-CASE-XAC-04030
		US-PATENT-CLASS-219-91			US-PATENT-APPL-SN-787410			US-PATENT-APPL-SN-520839
		US-PATENT-3,466,418			US-PATENT-CLASS-138-43			US-PATENT-CLASS-328-1
N71-18614* #	c 16	NASA-CASE-XGS-03644			US-PATENT-3,536,103			US-PATENT-3,464,016
		US-PATENT-APPL-SN-505320	N71-19214*	c 15	NASA-CASE-MFS-20410	N71-19479*	c 09	NASA-CASE-XMS-04300
		US-PATENT-CLASS-331-94.5			US-PATENT-APPL-SN-819599			US-PATENT-APPL-SN-516158
		US-PATENT-3,517,328			US-PATENT-CLASS-244-1			US-PATENT-CLASS-350-275
N71-18615*	c 12	NASA-CASE-XNP-09704			US-PATENT-3,534,926			US-PATENT-3,427,093
		US-PATENT-APPL-SN-730701	N71-19287*	c 02	NASA-CASE-GSC-10087-1	N71-19480*	c 09	NASA-CASE-XFR-05637
		US-PATENT-CLASS-137-594			US-PATENT-APPL-SN-701679			US-PATENT-APPL-SN-484855
		US-PATENT-CLASS-138-46			US-PATENT-CLASS-343-112			US-PATENT-CLASS-235-194
		US-PATENT-CLASS-251-127			US-PATENT-3,534,367			US-PATENT-3,423,579
		US-PATENT-CLASS-251-333	N71-19288*	c 08	NASA-CASE-NPO-10068	N71-19485*	c 15	NASA-CASE-MS-11010
		US-PATENT-CLASS-251-342			US-PATENT-APPL-SN-688969			US-PATENT-APPL-SN-605090
		US-PATENT-CLASS-251-61.1			US-PATENT-CLASS-340-172.5			US-PATENT-CLASS-251-31
		US-PATENT-3,532,118			US-PATENT-3,501,750			US-PATENT-3,447,774
N71-18616*	c 15	NASA-CASE-XLA-07390	N71-19417*	c 10	NASA-CASE-XMS-10984-1	N71-19486*	c 15	NASA-CASE-XMF-08522
		US-PATENT-APPL-SN-665681			US-PATENT-APPL-SN-605095			US-PATENT-APPL-SN-640447
		US-PATENT-CLASS-72-53			US-PATENT-CLASS-340-213.1			US-PATENT-CLASS-219-121
		US-PATENT-3,531,964			US-PATENT-3,533,093			US-PATENT-3,474,220
N71-18625*	c 14	NASA-CASE-NPO-10175	N71-19418*	c 10	NASA-CASE-GSC-10041-1	N71-19489*	c 15	NASA-CASE-XMF-04680
		US-PATENT-APPL-SN-685787			US-PATENT-APPL-SN-684209			US-PATENT-APPL-SN-634040
		US-PATENT-CLASS-137-505.12			US-PATENT-CLASS-331-113			US-PATENT-CLASS-33-147
		US-PATENT-3,443,583			US-PATENT-3,458,833			US-PATENT-3,425,131
N71-18692*	c 08	NASA-CASE-MFS-14322	N71-19420*	c 08	NASA-CASE-XNP-09453	N71-19493*	c 07	NASA-CASE-XKS-08485
		US-PATENT-APPL-SN-646934			US-PATENT-APPL-SN-640448			US-PATENT-APPL-SN-649078
		US-PATENT-CLASS-328-134			US-PATENT-CLASS-226-190			US-PATENT-CLASS-343-873
		US-PATENT-3,501,701			US-PATENT-3,507,436			US-PATENT-3,509,578
N71-18693*	c 08	NASA-CASE-XGS-04765	N71-19421*	c 10	NASA-CASE-XLA-08493	N71-19494*	c 11	NASA-CASE-MFS-10555
		US-PATENT-APPL-SN-577545			US-PATENT-APPL-SN-749148			US-PATENT-APPL-SN-700984
		US-PATENT-CLASS-235-156			US-PATENT-CLASS-324-72			US-PATENT-CLASS-35-12
		US-PATENT-3,508,036			US-PATENT-3,532,975			US-PATENT-3,516,179
N71-18694*	c 08	NASA-CASE-NPO-10201	N71-19431*	c 14	NASA-CASE-XGS-02439	N71-19516*	c 09	NASA-CASE-XNP-06937
		US-PATENT-APPL-SN-691738			US-PATENT-APPL-SN-487341			US-PATENT-APPL-SN-640449
		US-PATENT-CLASS-340-174			US-PATENT-CLASS-324-120			US-PATENT-CLASS-330-30
		US-PATENT-3,509,551			US-PATENT-3,422,352			US-PATENT-3,501,712
N71-18698*	c 03	NASA-CASE-NPO-10373	N71-19432*	c 08	NASA-CASE-XGS-02440	N71-19544*	c 08	NASA-CASE-XGS-01230
		US-PATENT-APPL-SN-718752			US-PATENT-APPL-SN-655677			US-PATENT-APPL-SN-356488
		US-PATENT-CLASS-136-89			US-PATENT-CLASS-328-42			US-PATENT-CLASS-340-347

N71-19545*	c 03	US-PATENT-3,474,441 NASA-CASE-NPO-10821 US-PATENT-APPL-SN-670814 US-PATENT-CLASS-136-89 US-PATENT-3,466,198	N71-20439*	c 14	US-PATENT-3,461,721 NASA-CASE-XAC-04886-1 US-PATENT-APPL-SN-574290 US-PATENT-CLASS-73-142 US-PATENT-3,425,272	N71-20742*	c 18	US-PATENT-3,360,980 NASA-CASE-XMS-02952 US-PATENT-APPL-SN-519160 US-PATENT-CLASS-55-158 US-PATENT-3,355,861
N71-19547*	c 10	NASA-CASE-XGS-03058 US-PATENT-APPL-SN-568987 US-PATENT-CLASS-307-289 US-PATENT-3,517,221	N71-20440*	c 15	NASA-CASE-XNP-09770 US-PATENT-APPL-SN-700120 US-PATENT-CLASS-209-10 US-PATENT-3,472,372	N71-20743*	c 17	NASA-CASE-XMF-02786 US-PATENT-APPL-SN-466873 US-PATENT-CLASS-75-142 US-PATENT-3,347,665
N71-19568*	c 14	NASA-CASE-MSC-10966 US-PATENT-APPL-SN-665676 US-PATENT-CLASS-250-203 US-PATENT-3,421,004	N71-20441*	c 15	NASA-CASE-XMS-08329-1 US-PATENT-APPL-SN-688742 US-PATENT-CLASS-73-141 US-PATENT-3,472,069	N71-20747*	c 25	NASA-CASE-XLE-02578 US-PATENT-APPL-SN-469012 US-PATENT-CLASS-313-271 US-PATENT-3,356,885
N71-19569*	c 15	NASA-CASE-XLA-05749 US-PATENT-APPL-SN-621714 US-PATENT-CLASS-137-582 US-PATENT-3,426,791	N71-20442*	c 14	NASA-CASE-MFS-11537 US-PATENT-APPL-SN-636878 US-PATENT-CLASS-23-254 US-PATENT-3,472,629	N71-20782*	c 10	NASA-CASE-XGS-01784 US-PATENT-APPL-SN-396444 US-PATENT-CLASS-250-206 US-PATENT-3,348,053
N71-19570*	c 15	NASA-CASE-XLE-05130-2 US-PATENT-APPL-SN-700586 US-PATENT-CLASS-277-25 US-PATENT-3,466,052	N71-20443*	c 15	NASA-CASE-MFS-07369 US-PATENT-APPL-SN-640462 US-PATENT-CLASS-29-492 US-PATENT-3,473,216	N71-20791*	c 07	NASA-CASE-XNP-05254 US-PATENT-APPL-SN-472372 US-PATENT-CLASS-325-31 US-PATENT-3,350,643
N71-19610*	c 09	NASA-CASE-NPO-10037 US-PATENT-APPL-SN-700987 US-PATENT-CLASS-200-152 US-PATENT-3,470,342	N71-20445*	c 09	NASA-CASE-XNP-09775 US-PATENT-APPL-SN-688247 US-PATENT-CLASS-333-96 US-PATENT-3,474,357	N71-20813*	c 15	NASA-CASE-XMS-02184 US-PATENT-APPL-SN-608247 US-PATENT-CLASS-248-27 US-PATENT-3,361,400
N71-19687*	c 08	NASA-CASE-XNP-04780 US-PATENT-APPL-SN-455477 US-PATENT-CLASS-340-347 US-PATENT-3,430,227	N71-20446*	c 09	NASA-CASE-XLE-04250 US-PATENT-APPL-SN-621098 US-PATENT-CLASS-310-58 US-PATENT-3,447,003	N71-20814*	c 07	NASA-CASE-XNP-01306 US-PATENT-APPL-SN-343426 US-PATENT-CLASS-179-15 US-PATENT-3,364,311
N71-19763*	c 08	NASA-CASE-XAC-06302 US-PATENT-APPL-SN-574284 US-PATENT-CLASS-325-60 US-PATENT-3,456,193	N71-20447*	c 09	NASA-CASE-XLA-02850 US-PATENT-APPL-SN-556784 US-PATENT-CLASS-307-267 US-PATENT-3,473,050	N71-20815*	c 12	NASA-CASE-XMF-01779 US-PATENT-APPL-SN-521999 US-PATENT-CLASS-346-1 US-PATENT-3,357,024
N71-19773*	c 07	NASA-CASE-GSC-10373-1 US-PATENT-APPL-SN-712658 US-PATENT-CLASS-325-4 US-PATENT-3,532,985	N71-20448*	c 10	NASA-CASE-XNP-03744 US-PATENT-APPL-SN-547877 US-PATENT-CLASS-318-314 US-PATENT-3,424,968	N71-20816*	c 09	NASA-CASE-XAC-01677 US-PATENT-APPL-SN-596338 US-PATENT-CLASS-73-147 US-PATENT-3,360,988
N71-19854*	c 07	NASA-CASE-GSC-10553-1 US-PATENT-APPL-SN-820963 US-PATENT-CLASS-343-100 US-PATENT-3,534,365	N71-20461*	c 14	NASA-CASE-XNP-09783 US-PATENT-APPL-SN-600682 US-PATENT-CLASS-117-6 US-PATENT-3,433,862	N71-20834*	c 33	NASA-CASE-XMS-02009 US-PATENT-APPL-SN-455352 US-PATENT-CLASS-141-5 US-PATENT-3,349,814
N71-20268*	c 05	NASA-CASE-XLA-02898 US-PATENT-APPL-SN-429932 US-PATENT-CLASS-128-1 US-PATENT-3,461,855	N71-20491*	c 03	NASA-CASE-XGS-05434 US-PATENT-APPL-SN-667636 US-PATENT-CLASS-136-182 US-PATENT-3,463,673	N71-20841*	c 10	NASA-CASE-XGS-01222 US-PATENT-APPL-SN-354182 US-PATENT-CLASS-325-305 US-PATENT-3,348,152
N71-20273*	c 03	NASA-CASE-NPO-10188 US-PATENT-APPL-SN-681687 US-PATENT-CLASS-244-1 US-PATENT-3,473,758	N71-20492*	c 03	NASA-CASE-XLE-04787 US-PATENT-APPL-SN-551846 US-PATENT-CLASS-136-89 US-PATENT-3,434,885	N71-20842*	c 09	NASA-CASE-XNP-05381 US-PATENT-APPL-SN-568352 US-PATENT-CLASS-338-82 US-PATENT-3,350,871
N71-20330*	c 28	NASA-CASE-XLE-103477-1 US-PATENT-APPL-SN-466390 US-PATENT-CLASS-60-39.36 US-PATENT-3,433,015	N71-20518*	c 24	NASA-CASE-XNP-02592 US-PATENT-APPL-SN-484490 US-PATENT-CLASS-324-33 US-PATENT-3,430,131	N71-20851*	c 09	NASA-CASE-XNP-04732 US-PATENT-APPL-SN-557584 US-PATENT-CLASS-339-177 US-PATENT-3,358,264
N71-20393*	c 15	NASA-CASE-MFS-06074 US-PATENT-APPL-SN-688743 US-PATENT-CLASS-228-9 US-PATENT-3,458,104	N71-20563*	c 25	NASA-CASE-XLA-06232 US-PATENT-APPL-SN-612740 US-PATENT-CLASS-324-58.5 US-PATENT-3,473,118	N71-20852*	c 10	NASA-CASE-XGS-03502 US-PATENT-APPL-SN-584066 US-PATENT-CLASS-331-17 US-PATENT-3,361,985
N71-20395*	c 15	NASA-CASE-XMF-06065 US-PATENT-APPL-SN-665679 US-PATENT-CLASS-219-275 US-PATENT-3,466,424	N71-20569*	c 09	NASA-CASE-XMS-08589-1 US-PATENT-APPL-SN-544899 US-PATENT-CLASS-324-57 US-PATENT-3,434,050	N71-20864*	c 09	NASA-CASE-XGS-03501 US-PATENT-APPL-SN-576521 US-PATENT-CLASS-343-16 US-PATENT-3,359,555
N71-20396*	c 31	NASA-CASE-XMF-08523 US-PATENT-APPL-SN-645563 US-PATENT-CLASS-244-1 US-PATENT-3,465,986	N71-20570*	c 02	NASA-CASE-XAC-08872 US-PATENT-APPL-SN-700174 US-PATENT-CLASS-244-76 US-PATENT-3,472,470	N71-20895*	c 03	NASA-CASE-XNP-00825 US-PATENT-APPL-SN-327163 US-PATENT-CLASS-136-89 US-PATENT-3,346,419
N71-20400*	c 16	NASA-CASE-MFS-11279 US-PATENT-APPL-SN-628094 US-PATENT-CLASS-219-121 US-PATENT-3,472,998	N71-20571*	c 08	NASA-CASE-XGS-04987 US-PATENT-APPL-SN-619908 US-PATENT-CLASS-315-24 US-PATENT-3,437,874	N71-20896*	c 12	NASA-CASE-XNP-02251 US-PATENT-APPL-SN-432030 US-PATENT-CLASS-321-48 US-PATENT-3,337,790
N71-20407*	c 03	NASA-CASE-NPO-10194 US-PATENT-APPL-SN-668249 US-PATENT-CLASS-136-182 US-PATENT-3,460,995	N71-20658*	c 09	NASA-CASE-XMS-03454 US-PATENT-APPL-SN-425363 US-PATENT-CLASS-343-915 US-PATENT-3,360,798	N71-20904*	c 03	NASA-CASE-XLE-01645 US-PATENT-APPL-SN-342574 US-PATENT-CLASS-136-86 US-PATENT-3,357,862
N71-20427*	c 14	NASA-CASE-XMS-13052 US-PATENT-APPL-SN-561223 US-PATENT-CLASS-62-268 US-PATENT-3,455,121	N71-20705*	c 09	NASA-CASE-XMF-01599 US-PATENT-APPL-SN-381940 US-PATENT-CLASS-117-212 US-PATENT-3,359,132	N71-20905*	c 06	NASA-CASE-XMF-02584 US-PATENT-APPL-SN-506135 US-PATENT-CLASS-260-2 US-PATENT-3,346,515
N71-20428*	c 14	NASA-CASE-XGS-04879 US-PATENT-APPL-SN-541399 US-PATENT-CLASS-324-5 US-PATENT-3,443,208	N71-20717*	c 06	NASA-CASE-XMF-04133 US-PATENT-APPL-SN-554949 US-PATENT-CLASS-260-2 US-PATENT-3,354,098	N71-20942*	c 28	NASA-CASE-XNP-04389 US-PATENT-APPL-SN-523511 US-PATENT-CLASS-60-265 US-PATENT-3,353,359
N71-20429*	c 14	NASA-CASE-XLE-05260 US-PATENT-APPL-SN-674355 US-PATENT-CLASS-73-117.4 US-PATENT-3,463,001	N71-20718*	c 05	NASA-CASE-XMS-04625 US-PATENT-APPL-SN-519161 US-PATENT-CLASS-244-122 US-PATENT-3,356,320	N71-21006*	c 14	NASA-CASE-XLA-01832 US-PATENT-APPL-SN-517858 US-PATENT-CLASS-346-50 US-PATENT-3,354,462
N71-20430*	c 14	NASA-CASE-XLA-03645 US-PATENT-APPL-SN-600266 US-PATENT-CLASS-250-83 US-PATENT-3,450,878	N71-20739*	c 15	NASA-CASE-XGS-02011 US-PATENT-APPL-SN-502693 US-PATENT-CLASS-308-9 US-PATENT-3,359,046	N71-21007*	c 14	NASA-CASE-XMS-06236 US-PATENT-APPL-SN-482670 US-PATENT-CLASS-73-290 US-PATENT-3,355,948
N71-20435*	c 14	NASA-CASE-XMS-06767-1 US-PATENT-APPL-SN-716785 US-PATENT-CLASS-73-422 US-PATENT-3,438,263	N71-20740*	c 15	NASA-CASE-XLA-01808 US-PATENT-APPL-SN-517159 US-PATENT-CLASS-74-471 US-PATENT-3,364,777	N71-21042*	c 08	NASA-CASE-XGS-01021 US-PATENT-APPL-SN-279646 US-PATENT-CLASS-340-174.1 US-PATENT-3,327,298
N71-20436*	c 12	NASA-CASE-LAR-11138 US-PATENT-APPL-SN-694317 US-PATENT-CLASS-73-147	N71-20741*	c 14	NASA-CASE-XMS-01618 US-PATENT-APPL-SN-418362 US-PATENT-CLASS-73-29	N71-21045*	c 32	NASA-CASE-XLA-01731 US-PATENT-APPL-SN-425365 US-PATENT-CLASS-52-2



N71-21060*	c 15	US-PATENT-3,364,631	N71-21483*	c 10	US-PATENT-3,345,866	N71-22706*	c 15	US-PATENT-3,341,977
		NASA-CASE-XLA-03660			NASA-CASE-XGS-01155			NASA-CASE-XMS-09310
		US-PATENT-APPL-SN-482307			US-PATENT-APPL-SN-557871			US-PATENT-APPL-SN-655724
N71-21064*	c 31	US-PATENT-CLASS-95-53	N71-21489*	c 15	US-PATENT-CLASS-343-16	N71-22707*	c 08	US-PATENT-CLASS-137-496
		US-PATENT-3,361,045			US-PATENT-3,344,425			US-PATENT-3,384,111
		NASA-CASE-XGS-02554			NASA-CASE-XNP-06914			NASA-CASE-XNP-04067
N71-21068*	c 18	US-PATENT-APPL-SN-504266	N71-21493*	c 28	US-PATENT-APPL-SN-590147	N71-22710*	c 08	US-PATENT-APPL-SN-466875
		US-PATENT-CLASS-244-1			US-PATENT-CLASS-85-33			US-PATENT-CLASS-340-172.5
		US-PATENT-3,350,034			US-PATENT-3,352,192			US-PATENT-3,369,222
N71-21072*	c 14	NASA-CASE-XNP-02888	N71-21507*	c 33	NASA-CASE-XLA-10450	N71-22713*	c 15	NASA-CASE-XNP-02778
		US-PATENT-APPL-SN-409126			US-PATENT-APPL-SN-594587			US-PATENT-APPL-SN-508170
		US-PATENT-CLASS-239-265.11			US-PATENT-CLASS-239-265.19			US-PATENT-CLASS-340-172.5
N71-21076*	c 15	US-PATENT-3,347,465	N71-21528*	c 15	US-PATENT-3,347,466	N71-22721*	c 15	US-PATENT-3,369,223
		NASA-CASE-XAC-02981			NASA-CASE-XLE-04603			NASA-CASE-XLA-03492
		US-PATENT-APPL-SN-464879			US-PATENT-APPL-SN-638194			US-PATENT-APPL-SN-395348
N71-21078*	c 15	US-PATENT-CLASS-73-398	N71-21529*	c 15	US-PATENT-CLASS-60-243	N71-22722*	c 15	US-PATENT-CLASS-156-60
		US-PATENT-3,352,157			US-PATENT-3,347,046			US-PATENT-3,342,653
		NASA-CASE-XMS-03745			NASA-CASE-XLA-01446			NASA-CASE-XMF-03212
N71-21079*	c 14	US-PATENT-APPL-SN-534295	N71-21530*	c 15	US-PATENT-APPL-SN-400613	N71-22723*	c 15	US-PATENT-APPL-SN-577549
		US-PATENT-CLASS-24-263			US-PATENT-CLASS-53-102			US-PATENT-CLASS-55-418
		US-PATENT-3,346,929			US-PATENT-3,336,725			US-PATENT-3,385,036
N71-21082*	c 14	NASA-CASE-XNP-03459	N71-21531*	c 15	NASA-CASE-XGS-02422	N71-22748*	c 05	NASA-CASE-XMS-04170
		US-PATENT-APPL-SN-457879			US-PATENT-APPL-SN-493943			US-PATENT-APPL-SN-482311
		US-PATENT-CLASS-29-495			US-PATENT-CLASS-74-126			US-PATENT-CLASS-9-312
N71-21088*	c 14	US-PATENT-3,357,093	N71-21583*	c 09	US-PATENT-3,331,255	N71-22750*	c 07	US-PATENT-3,343,189
		NASA-CASE-XLA-03102			NASA-CASE-XMS-03722			NASA-CASE-XNP-01735
		US-PATENT-APPL-SN-576195			US-PATENT-APPL-SN-487934			US-PATENT-APPL-SN-408438
N71-21089*	c 12*	US-PATENT-CLASS-33-31	N71-21586*	c 33	US-PATENT-CLASS-267-64	N71-22752*	c 14	US-PATENT-CLASS-343-786
		US-PATENT-3,364,578			US-PATENT-3,330,549			US-PATENT-3,373,431
		NASA-CASE-XGS-02629			NASA-CASE-XNP-02341			NASA-CASE-XMS-04170
N71-21090*	c 14	US-PATENT-APPL-SN-500435	N71-21651*	c 18	US-PATENT-APPL-SN-432025	N71-22755*	c 14	US-PATENT-APPL-SN-482311
		US-PATENT-CLASS-244-1			US-PATENT-CLASS-52-127			US-PATENT-CLASS-9-312
		US-PATENT-3,350,033			US-PATENT-3,330,082			US-PATENT-3,343,189
N71-21091*	c 14	NASA-CASE-XNP-06957	N71-21688*	c 21	NASA-CASE-XMS-06876	N71-22792*	c 33	NASA-CASE-XNP-02748
		US-PATENT-APPL-SN-406097			US-PATENT-APPL-SN-605100			US-PATENT-APPL-SN-420245
		US-PATENT-CLASS-250-83.3			US-PATENT-CLASS-72-34			US-PATENT-CLASS-340-146.1
N71-21177*	c 15	US-PATENT-3,348,048	N71-21693*	c 25	US-PATENT-3,345,840	N71-22796*	c 09	US-PATENT-3,373,404
		NASA-CASE-XMS-01905			NASA-CASE-XLE-02008			NASA-CASE-XNP-01735
		US-PATENT-APPL-SN-280580			US-PATENT-APPL-SN-487342			US-PATENT-APPL-SN-408438
N71-21179*	c 15	US-PATENT-CLASS-141-91	N71-21694*	c 25	US-PATENT-CLASS-338-64	N71-22797*	c 15	US-PATENT-CLASS-343-786
		US-PATENT-3,331,404			US-PATENT-3,329,918			US-PATENT-3,373,431
		NASA-CASE-XLE-00787			NASA-CASE-XLA-01794			NASA-CASE-XMF-01974
N71-21179*	c 15	US-PATENT-APPL-SN-330210	N71-21708*	c 21	US-PATENT-APPL-SN-464880	N71-22798*	c 15	US-PATENT-APPL-SN-568354
		US-PATENT-CLASS-324-33			US-PATENT-CLASS-73-86			US-PATENT-CLASS-73-419
		US-PATENT-3,346,806			US-PATENT-3,357,237			US-PATENT-3,383,932
N71-21179*	c 15	NASA-CASE-XNP-02983	N71-21744*	c 15	NASA-CASE-XMF-01402	N71-22799*	c 15	NASA-CASE-XLA-00934
		US-PATENT-APPL-SN-407599			US-PATENT-APPL-SN-328140			US-PATENT-APPL-SN-326298
		US-PATENT-CLASS-73-88.5			US-PATENT-CLASS-161-68			US-PATENT-CLASS-73-84
N71-21234*	c 15	US-PATENT-3,350,926	N71-21747*	c 15	US-PATENT-3,346,442	N71-22874*	c 15	US-PATENT-3,339,404
		NASA-CASE-XAC-06956			NASA-CASE-XMF-00684			NASA-CASE-XLA-01243
		US-PATENT-APPL-SN-538166			US-PATENT-APPL-SN-260087			US-PATENT-APPL-SN-538911
N71-21234*	c 15	US-PATENT-CLASS-259-71	N71-21819*	c 27	US-PATENT-CLASS-235-150.25	N71-22875*	c 11	US-PATENT-CLASS-244-1
		US-PATENT-3,347,531			US-PATENT-3,331,951			US-PATENT-3,384,324
		NASA-CASE-XLA-01401			NASA-CASE-XLA-03103			NASA-CASE-XKS-03381
N71-21234*	c 15	US-PATENT-APPL-SN-382976	N71-21821*	c 23	US-PATENT-APPL-SN-531642	N71-22877*	c 15	US-PATENT-APPL-SN-437611
		US-PATENT-CLASS-235-61.6			US-PATENT-CLASS-315-111			US-PATENT-CLASS-317-9
		US-PATENT-3,346,724			US-PATENT-3,333,152			US-PATENT-3,340,430
N71-21311*	c 15	NASA-CASE-XKS-02582	N71-21822*	c 28	US-PATENT-3,333,152	N71-22878*	c 15	NASA-CASE-XLE-01092
		US-PATENT-APPL-SN-424153			NASA-CASE-XLE-02902			US-PATENT-APPL-SN-422098
		US-PATENT-CLASS-251-172			US-PATENT-APPL-SN-485957			US-PATENT-CLASS-72-253
N71-21311*	c 15	US-PATENT-3,327,991	N71-21824*	c 26	US-PATENT-CLASS-60-202	N71-22880*	c 21	US-PATENT-3,342,055
		NASA-CASE-XNP-03637			US-PATENT-3,336,748			NASA-CASE-XMS-04178
		US-PATENT-APPL-SN-453232			NASA-CASE-XLA-02551			US-PATENT-APPL-SN-511299
N71-21403*	c 15	US-PATENT-CLASS-310-9.1	N71-21824*	c 26	US-PATENT-CLASS-244-1	N71-22877*	c 15	US-PATENT-CLASS-83-467
		US-PATENT-3,359,435			US-PATENT-3,329,375			US-PATENT-3,367,224
		NASA-CASE-XMF-03988			NASA-CASE-XGS-04227			NASA-CASE-XMF-03511
N71-21404*	c 15	US-PATENT-APPL-SN-578923	N71-21881*	c 31	US-PATENT-APPL-SN-545805	N71-22881*	c 23	US-PATENT-APPL-SN-504014
		US-PATENT-CLASS-252-26			US-PATENT-CLASS-74-409			US-PATENT-CLASS-90-12
		US-PATENT-3,361,666			US-PATENT-3,359,819			US-PATENT-3,386,337
N71-21449*	c 09	NASA-CASE-XLA-01262	N71-21882*	c 23	NASA-CASE-XLE-03494	N71-22878*	c 15	NASA-CASE-XLA-00188
		US-PATENT-APPL-SN-386800			US-PATENT-APPL-SN-529593			US-PATENT-APPL-SN-254847
		US-PATENT-CLASS-156-3			US-PATENT-CLASS-60-251			US-PATENT-CLASS-102-49.5
N71-21473*	c 10	US-PATENT-3,356,549	N71-21882*	c 23	US-PATENT-3,345,822	N71-22877*	c 15	US-PATENT-3,368,486
		NASA-CASE-XMS-01991			NASA-CASE-XNP-01059			NASA-CASE-XAC-05333
		US-PATENT-APPL-SN-410326			US-PATENT-APPL-SN-393464			US-PATENT-APPL-SN-546148
N71-21474*	c 11	US-PATENT-CLASS-323-22	N71-21882*	c 23	US-PATENT-CLASS-250-232	N71-22877*	c 15	US-PATENT-CLASS-119-15
		US-PATENT-3,344,340			US-PATENT-3,354,320			US-PATENT-3,367,308
		NASA-CASE-XGS-08679			NASA-CASE-XNP-04124			NASA-CASE-XMF-10040
N71-21475*	c 11	US-PATENT-APPL-SN-312443	N71-21882*	c 23	US-PATENT-APPL-SN-498168	N71-22880*	c 21	US-PATENT-APPL-SN-592680
		US-PATENT-CLASS-343-113			US-PATENT-CLASS-60-202			US-PATENT-CLASS-188-1
		US-PATENT-3,340,532			US-PATENT-3,345,820			US-PATENT-3,381,778
N71-21476*	c 07	NASA-CASE-XMS-04798	N71-21882*	c 23	NASA-CASE-XNP-05429	N71-22881*	c 23	NASA-CASE-XMS-04545
		US-PATENT-APPL-SN-480210			US-PATENT-APPL-SN-578928			US-PATENT-APPL-SN-508601
		US-PATENT-CLASS-35-12			US-PATENT-CLASS-103-1			US-PATENT-CLASS-73-144
N71-21475*	c 11	US-PATENT-3,330,052	N71-21881*	c 31	US-PATENT-3,361,067	N71-22881*	c 23	US-PATENT-3,381,527
		NASA-CASE-XLA-05378			NASA-CASE-XNP-02595			NASA-CASE-XLA-00793
		US-PATENT-APPL-SN-484156			US-PATENT-APPL-SN-502709			US-PATENT-APPL-SN-369334
N71-21476*	c 07	US-PATENT-CLASS-73-343	N71-21882*	c 23	US-PATENT-CLASS-244-1	N71-22881*	c 23	US-PATENT-CLASS-88-1
		US-PATENT-3,331,246			US-PATENT-3,333,788			US-PATENT-3,381,569
		NASA-CASE-XNP-00746			NASA-CASE-XNP-03853			NASA-CASE-XLE-04

N71-22890*	c 33	US-PATENT-3,373,430 NASA-CASE-XLA-07728 US-PATENT-APPL-SN-538908 US-PATENT-CLASS-165-96 US-PATENT-3,374,830	N71-22893*	c 14	US-PATENT-3,377,845 NASA-CASE-XMS-05365 US-PATENT-APPL-SN-515484 US-PATENT-CLASS-310-8.5 US-PATENT-3,387,149	N71-23037*	c 14	US-PATENT-3,383,903 NASA-CASE-XAC-01662 US-PATENT-APPL-SN-385520 US-PATENT-CLASS-324-117 US-PATENT-3,365,665
N71-22894*	c 18	NASA-CASE-XLE-03925 US-PATENT-APPL-SN-514407 US-PATENT-CLASS-75-204 US-PATENT-3,337,337	N71-22994*	c 15	NASA-CASE-XFR-05421 US-PATENT-APPL-SN-567686 US-PATENT-CLASS-24-122 US-PATENT-3,378,892	N71-23039*	c 14	NASA-CASE-XNP-01659 US-PATENT-APPL-SN-410332 US-PATENT-CLASS-136-230 US-PATENT-3,377,208
N71-22895*	c 16	NASA-CASE-XMS-04269 US-PATENT-APPL-SN-516783 US-PATENT-CLASS-250-199 US-PATENT-3,341,708	N71-22995*	c 14	NASA-CASE-XNP-06680 US-PATENT-APPL-SN-562444 US-PATENT-CLASS-73-9 US-PATENT-3,376,730	N71-23040*	c 14	NASA-CASE-XNP-05535 US-PATENT-APPL-SN-487939 US-PATENT-CLASS-244-1 US-PATENT-3,339,863
N71-22896*	c 05	NASA-CASE-XMS-02399 US-PATENT-APPL-SN-492344 US-PATENT-CLASS-128-2.06 US-PATENT-3,384,075	N71-22996*	c 14	NASA-CASE-XGS-01331 US-PATENT-APPL-SN-445807 US-PATENT-CLASS-250-218 US-PATENT-3,386,258	N71-23041*	c 14	NASA-CASE-XNP-01056 US-PATENT-APPL-SN-377146 US-PATENT-CLASS-250-41.9 US-PATENT-3,340,395
N71-22897*	c 08	NASA-CASE-XNP-01753 US-PATENT-APPL-SN-423412 US-PATENT-CLASS-235-92 US-PATENT-3,374,339	N71-22997*	c 15	NASA-CASE-XNP-01641 US-PATENT-APPL-SN-464885 US-PATENT-CLASS-308-10 US-PATENT-3,378,315	N71-23042*	c 11	NASA-CASE-XMS-02930 US-PATENT-APPL-SN-417253 US-PATENT-CLASS-250-52 US-PATENT-3,340,397
N71-22961*	c 10	NASA-CASE-XMS-02159 US-PATENT-APPL-SN-534564 US-PATENT-CLASS-323-56 US-PATENT-3,365,657	N71-22998*	c 18	NASA-CASE-XGS-02435 US-PATENT-APPL-SN-392965 US-PATENT-CLASS-106-40 US-PATENT-3,382,082	N71-23043*	c 26	NASA-CASE-XNP-01859 US-PATENT-APPL-SN-410330 US-PATENT-CLASS-136-89 US-PATENT-3,396,057
N71-22962*	c 10	NASA-CASE-XGS-05441 US-PATENT-APPL-SN-505321 US-PATENT-CLASS-328-233 US-PATENT-3,366,886	N71-22999*	c 09	NASA-CASE-XLA-00781 US-PATENT-APPL-SN-307271 US-PATENT-CLASS-88-14 US-PATENT-3,364,813	N71-23046*	c 17	NASA-CASE-XNP-04338 US-PATENT-APPL-SN-461765 US-PATENT-CLASS-29-182.2 US-PATENT-3,421,864
N71-22964*	c 14	NASA-CASE-XLE-02024 US-PATENT-APPL-SN-422099 US-PATENT-CLASS-73-15 US-PATENT-3,365,930	N71-23001*	c 07	NASA-CASE-XGS-01812 US-PATENT-APPL-SN-392973 US-PATENT-CLASS-340-174.1 US-PATENT-3,380,042	N71-23047*	c 18	NASA-CASE-XLA-01995 US-PATENT-APPL-SN-411945 US-PATENT-CLASS-148-6.16 US-PATENT-3,395,053
N71-22965*	c 14	NASA-CASE-XGS-02319 US-PATENT-APPL-SN-496205 US-PATENT-CLASS-73-117 US-PATENT-3,365,941	N71-23006*	c 03	NASA-CASE-XGS-02631 US-PATENT-APPL-SN-425972 US-PATENT-CLASS-136-133 US-PATENT-3,340,099	N71-23048*	c 15	NASA-CASE-XNP-03972 US-PATENT-APPL-SN-502710 US-PATENT-CLASS-184-1 US-PATENT-3,387,445
N71-22968*	c 31	NASA-CASE-XLA-02050 US-PATENT-APPL-SN-568067 US-PATENT-CLASS-244-1 US-PATENT-3,386,885	N71-23007*	c 02	NASA-CASE-XMF-04163 US-PATENT-APPL-SN-424156 US-PATENT-CLASS-73-189 US-PATENT-3,340,732	N71-23049*	c 15	NASA-CASE-XMF-01049 US-PATENT-APPL-SN-506137 US-PATENT-CLASS-339-5 US-PATENT-3,375,479
N71-22969*	c 31	NASA-CASE-XLA-03132 US-PATENT-APPL-SN-610728 US-PATENT-CLASS-244-1 US-PATENT-3,386,886	N71-23008*	c 31	NASA-CASE-XLA-04804 US-PATENT-APPL-SN-577546 US-PATENT-CLASS-102-49.5 US-PATENT-3,384,016	N71-23050*	c 15	NASA-CASE-XMF-01730 US-PATENT-APPL-SN-517869 US-PATENT-CLASS-228-8 US-PATENT-3,373,914
N71-22974*	c 03	NASA-CASE-XGS-02630 US-PATENT-APPL-SN-494287 US-PATENT-CLASS-136-132 US-PATENT-3,382,107	N71-23009*	c 31	NASA-CASE-XGS-02607 US-PATENT-APPL-SN-474531 US-PATENT-CLASS-244-1 US-PATENT-3,341,151	N71-23051*	c 15	NASA-CASE-XAC-01158 US-PATENT-APPL-SN-420250 US-PATENT-CLASS-137-625.5 US-PATENT-3,369,564
N71-22975*	c 06	NASA-CASE-XNP-07659 US-PATENT-APPL-SN-567806 US-PATENT-CLASS-18-26 US-PATENT-3,381,339	N71-23015*	c 09	NASA-CASE-XGS-02751 US-PATENT-APPL-SN-491059 US-PATENT-CLASS-307-288 US-PATENT-3,374,366	N71-23052*	c 15	NASA-CASE-XLA-03497 US-PATENT-APPL-SN-392992 US-PATENT-CLASS-156-285 US-PATENT-3,373,069
N71-22982*	c 15	NASA-CASE-XLA-02809 US-PATENT-APPL-SN-554897 US-PATENT-CLASS-308-176 US-PATENT-3,397,932	N71-23021*	c 09	NASA-CASE-XAC-02807 US-PATENT-APPL-SN-456581 US-PATENT-CLASS-324-120 US-PATENT-3,384,820	N71-23080*	c 05	NASA-CASE-XLE-02531 US-PATENT-APPL-SN-425096 US-PATENT-CLASS-312-1 US-PATENT-3,337,279
N71-22983*	c 28	NASA-CASE-XMF-06926 US-PATENT-APPL-SN-537615 US-PATENT-CLASS-60-258 US-PATENT-3,336,754	N71-23022*	c 15	NASA-CASE-XMS-01625 US-PATENT-APPL-SN-418933 US-PATENT-CLASS-136-86 US-PATENT-3,389,017	N71-23081*	c 28	NASA-CASE-XNP-02923 US-PATENT-APPL-SN-494280 US-PATENT-CLASS-60-202 US-PATENT-3,367,114
N71-22984*	c 07	NASA-CASE-XMS-04312 US-PATENT-APPL-SN-521754 US-PATENT-CLASS-343-708 US-PATENT-3,384,895	N71-23023*	c 15	NASA-CASE-XMF-04042 US-PATENT-APPL-SN-605518 US-PATENT-CLASS-55-204 US-PATENT-3,397,512	N71-23084*	c 10	NASA-CASE-XLA-01219 US-PATENT-APPL-SN-402978 US-PATENT-CLASS-332-1 US-PATENT-3,366,894
N71-22985*	c 09	NASA-CASE-XMF-03934 US-PATENT-APPL-SN-530958 US-PATENT-CLASS-250-83.3 US-PATENT-3,379,885	N71-23024*	c 15	NASA-CASE-XNP-01747 US-PATENT-APPL-SN-413661 US-PATENT-CLASS-251-148 US-PATENT-3,341,169	N71-23085*	c 33	NASA-CASE-XFR-03802 US-PATENT-APPL-SN-460877 US-PATENT-CLASS-73-190 US-PATENT-3,367,182
N71-22986*	c 10	NASA-CASE-XMF-01892 US-PATENT-APPL-SN-464878 US-PATENT-CLASS-328-167 US-PATENT-3,375,451	N71-23025*	c 15	NASA-CASE-XNP-08877 US-PATENT-APPL-SN-574282 US-PATENT-CLASS-62-6 US-PATENT-3,367,121	N71-23086*	c 15	NASA-CASE-XMS-04533 US-PATENT-APPL-SN-557016 US-PATENT-CLASS-202-234 US-PATENT-3,397,117
N71-22987*	c 09	NASA-CASE-XLE-04788 US-PATENT-APPL-SN-537617 US-PATENT-CLASS-313-352 US-PATENT-3,396,303	N71-23026*	c 07	NASA-CASE-XNP-02791 US-PATENT-APPL-SN-390251 US-PATENT-CLASS-178-6 US-PATENT-3,383,461	N71-23087*	c 14	NASA-CASE-XNP-03918 US-PATENT-APPL-SN-510475 US-PATENT-CLASS-73-88.5 US-PATENT-3,388,590
N71-22988*	c 09	NASA-CASE-XGS-03304 US-PATENT-APPL-SN-483886 US-PATENT-CLASS-73-1 US-PATENT-3,381,517	N71-23027*	c 09	NASA-CASE-XNP-01960 US-PATENT-APPL-SN-438135 US-PATENT-CLASS-29-572 US-PATENT-3,340,599	N71-23088*	c 18	NASA-CASE-XNP-00597 US-PATENT-APPL-SN-410325 US-PATENT-CLASS-65-7 US-PATENT-3,337,315
N71-22989*	c 14	NASA-CASE-XLA-01551 US-PATENT-APPL-SN-422092 US-PATENT-CLASS-73-190 US-PATENT-3,382,714	N71-23029*	c 10	NASA-CASE-XGS-03427 US-PATENT-APPL-SN-500446 US-PATENT-CLASS-307-265 US-PATENT-3,383,524	N71-23092*	c 14	NASA-CASE-XLA-01530 US-PATENT-APPL-SN-420466 US-PATENT-CLASS-188-1 US-PATENT-3,337,004
N71-22990*	c 14	NASA-CASE-XMS-04201 US-PATENT-APPL-SN-507254 US-PATENT-CLASS-324-70 US-PATENT-3,379,974	N71-23030*	c 11	NASA-CASE-XNP-03578 US-PATENT-APPL-SN-445292 US-PATENT-CLASS-73-147 US-PATENT-3,342,066	N71-23093*	c 14	NASA-CASE-XLE-03280 US-PATENT-APPL-SN-517156 US-PATENT-CLASS-73-400 US-PATENT-3,379,064
N71-22991*	c 14	NASA-CASE-XLA-01791 US-PATENT-APPL-SN-462763 US-PATENT-CLASS-250-227 US-PATENT-3,397,318	N71-23033*	c 10	NASA-CASE-XNP-01318 US-PATENT-APPL-SN-380965 US-PATENT-CLASS-340-174 US-PATENT-3,388,387	N71-23096*	c 05	NASA-CASE-XMS-06064 US-PATENT-APPL-SN-563646 US-PATENT-CLASS-2-14 US-PATENT-3,378,851
N71-22992*	c 14	NASA-CASE-XGS-01023 US-PATENT-APPL-SN-446131 US-PATENT-CLASS-73-65	N71-23036*	c 14	NASA-CASE-XNP-01660 US-PATENT-APPL-SN-578916 US-PATENT-CLASS-73-4	N71-23097*	c 09	NASA-CASE-XNP-02140 US-PATENT-APPL-SN-440036 US-PATENT-CLASS-330-61

N71-23098*	c 07	US-PATENT-3,337,812	N71-23269*	c 14	US-PATENT-3,419,329	N71-23544*	c 10	US-PATENT-3,393,347
		NASA-CASE-XGS-00740			NASA-CASE-XLA-01584			NASA-CASE-XNP-05382
		US-PATENT-APPL-SN-353644			US-PATENT-APPL-SN-416943			US-PATENT-APPL-SN-536217
N71-23099*	c 10	US-PATENT-CLASS-325-305	N71-23270*	c 09	US-PATENT-CLASS-250-203	N71-23545*	c 09	US-PATENT-CLASS-332-19
		US-PATENT-3,341,778			US-PATENT-3,389,260			US-PATENT-3,393,380
		NASA-CASE-XNP-08875			NASA-CASE-XMS-04919			NASA-CASE-XMF-04367
N71-23159*	c 05	US-PATENT-APPL-SN-640455	N71-23271*	c 10	US-PATENT-APPL-SN-516155	N71-23548*	c 09	US-PATENT-APPL-SN-457874
		US-PATENT-CLASS-343-6.5			US-PATENT-CLASS-307-263			US-PATENT-CLASS-307-235
		US-PATENT-3,380,049			US-PATENT-3,417,266			US-PATENT-3,404,289
N71-23161*	c 05	NASA-CASE-XMF-06589	N71-23289*	c 21	NASA-CASE-XNP-00952	N71-23573*	c 09	NASA-CASE-XNP-06507
		US-PATENT-APPL-SN-543206			US-PATENT-APPL-SN-388967			US-PATENT-APPL-SN-605099
		US-PATENT-CLASS-5-82			US-PATENT-CLASS-317-148.5			US-PATENT-CLASS-333-98
N71-23174*	c 14	US-PATENT-3,343,180	N71-23292*	c 26	US-PATENT-3,417,298	N71-23598*	c 09	US-PATENT-3,419,827
		NASA-CASE-XAC-07043			NASA-CASE-XMF-01669			NASA-CASE-XGS-01418
		US-PATENT-APPL-SN-566397			US-PATENT-APPL-SN-399419			US-PATENT-APPL-SN-392969
N71-23175*	c 14	US-PATENT-CLASS-2-2.1	N71-23293*	c 28	US-PATENT-CLASS-74-5.47	N71-23599*	c 22	US-PATENT-CLASS-333-73
		US-PATENT-3,405,406			US-PATENT-3,415,126			US-PATENT-3,393,384
		NASA-CASE-XGS-02610			NASA-CASE-XLE-10715			NASA-CASE-XER-11019
N71-23185*	c 04	US-PATENT-APPL-SN-491054	N71-23295*	c 08	US-PATENT-CLASS-321-60	N71-23654*	c 26	US-PATENT-APPL-SN-171971
		US-PATENT-CLASS-321-60			US-PATENT-3,417,316			US-PATENT-CLASS-331-78
		US-PATENT-3,417,316			NASA-CASE-XKS-03509			US-PATENT-3,470,489
N71-23187*	c 03	US-PATENT-APPL-SN-566392	N71-23311*	c 09	US-PATENT-CLASS-3,409,554	N71-23658*	c 18	NASA-CASE-XLE-01903
		US-PATENT-CLASS-356-166			NASA-CASE-XNP-06942			US-PATENT-APPL-SN-466868
		US-PATENT-3,414,358			US-PATENT-APPL-SN-563651			US-PATENT-CLASS-310-4
N71-23188*	c 09	US-PATENT-3,414,358	N71-23315*	c 10	US-PATENT-CLASS-60-202	N71-23663*	c 10	US-PATENT-3,393,330
		NASA-CASE-XAC-05422			US-PATENT-3,412,559			NASA-CASE-XLE-02798
		US-PATENT-APPL-SN-483885			NASA-CASE-XNP-04819			US-PATENT-APPL-SN-660571
N71-23189*	c 09	US-PATENT-CLASS-128-2.05	N71-23316*	c 09	US-PATENT-APPL-SN-502701	N71-23669*	c 10	US-PATENT-CLASS-148-1.5
		US-PATENT-3,412,729			US-PATENT-CLASS-340-146.2			US-PATENT-3,390,020
		NASA-CASE-XGS-03390			US-PATENT-3,390,378			NASA-CASE-XLE-02647
N71-23190*	c 09	US-PATENT-APPL-SN-551182	N71-23317*	c 05	US-PATENT-CLASS-307-260	N71-23698*	c 14	US-PATENT-APPL-SN-430226
		US-PATENT-CLASS-136-89			US-PATENT-3,390,282			US-PATENT-CLASS-220-9
		US-PATENT-3,419,433			NASA-CASE-XLA-03356			US-PATENT-3,392,864
N71-23191*	c 09	NASA-CASE-XMF-14301	N71-23336*	c 03	US-PATENT-APPL-SN-536216	N71-23710*	c 18	NASA-CASE-XGS-01118
		US-PATENT-APPL-SN-697341			US-PATENT-CLASS-307-234			US-PATENT-APPL-SN-408442
		US-PATENT-CLASS-321-2			US-PATENT-3,448,290			US-PATENT-CLASS-235-154
N71-23189*	c 09	US-PATENT-3,470,446	N71-23365*	c 09	US-PATENT-CLASS-60-202	N71-23663*	c 10	US-PATENT-3,399,299
		NASA-CASE-XNP-06028			NASA-CASE-XMS-09352			NASA-CASE-XKS-04631
		US-PATENT-APPL-SN-649356			US-PATENT-APPL-SN-564919			US-PATENT-APPL-SN-663180
N71-23190*	c 09	US-PATENT-CLASS-315-26	N71-23317*	c 05	US-PATENT-CLASS-323-22	N71-23669*	c 10	US-PATENT-CLASS-200-82
		US-PATENT-3,431,460			US-PATENT-3,417,321			US-PATENT-3,433,909
		NASA-CASE-XLE-04501			NASA-CASE-XMS-06061			NASA-CASE-XAC-10607
N71-23191*	c 09	US-PATENT-APPL-SN-522794	N71-23336*	c 03	US-PATENT-APPL-SN-605092	N71-23698*	c 14	US-PATENT-APPL-SN-694345
		US-PATENT-CLASS-313-231			US-PATENT-CLASS-307-260			US-PATENT-CLASS-331-111
		US-PATENT-3,413,510			US-PATENT-3,467,837			US-PATENT-3,470,495
N71-23191*	c 09	NASA-CASE-XMS-05890	N71-23336*	c 03	NASA-CASE-XGS-01513	N71-23698*	c 14	NASA-CASE-XGS-08259
		US-PATENT-APPL-SN-650166			US-PATENT-APPL-SN-502756			US-PATENT-APPL-SN-666551
		US-PATENT-CLASS-137-554			US-PATENT-CLASS-136-166			US-PATENT-CLASS-242-192
N71-23225*	c 14	US-PATENT-3,414,012	N71-23354*	c 03	US-PATENT-3,390,017	N71-23699*	c 14	US-PATENT-3,460,781
		NASA-CASE-XNP-04817			NASA-CASE-XLE-04535			NASA-CASE-XMF-10289
		US-PATENT-APPL-SN-516152			US-PATENT-APPL-SN-588671			US-PATENT-APPL-SN-674356
N71-23225*	c 14	US-PATENT-CLASS-73-12	N71-23365*	c 17	US-PATENT-CLASS-250-212	N71-23710*	c 18	US-PATENT-CLASS-324-72
		US-PATENT-3,412,598			US-PATENT-3,437,818			US-PATENT-3,470,466
		NASA-CASE-XNP-06509			NASA-CASE-XNP-03063			NASA-CASE-XLE-08511
N71-23226*	c 14	US-PATENT-APPL-SN-570095	N71-23365*	c 17	US-PATENT-APPL-SN-521994	N71-23710*	c 18	US-PATENT-APPL-SN-635972
		US-PATENT-CLASS-73-194			US-PATENT-CLASS-75-172			US-PATENT-CLASS-29-182.1
		US-PATENT-3,411,356			US-PATENT-3,413,115			US-PATENT-3,419,363
N71-23227*	c 14	NASA-CASE-XMF-06515	N71-23401*	c 14	US-PATENT-3,413,115	N71-23723*	c 30	NASA-CASE-XNP-09832
		US-PATENT-APPL-SN-548808			NASA-CASE-XGS-03230			US-PATENT-APPL-SN-632163
		US-PATENT-CLASS-73-432			US-PATENT-APPL-SN-517158			US-PATENT-CLASS-343-100
N71-23230*	c 06	US-PATENT-3,408,870	N71-23405*	c 07	US-PATENT-CLASS-250-83	N71-23725*	c 14	US-PATENT-3,417,399
		NASA-CASE-XMF-06409			US-PATENT-3,419,992			NASA-CASE-XGS-01013
		US-PATENT-APPL-SN-575930			NASA-CASE-XGS-01537			US-PATENT-APPL-SN-665209
N71-23230*	c 06	US-PATENT-CLASS-260-448.2	N71-23405*	c 07	US-PATENT-APPL-SN-432026	N71-23725*	c 14	US-PATENT-APPL-SN-665209
		US-PATENT-3,433,818			US-PATENT-CLASS-325-163			US-PATENT-CLASS-73-133
		NASA-CASE-XMF-08217			US-PATENT-3,417,332			US-PATENT-3,460,381
N71-23239*	c 03	US-PATENT-APPL-SN-688807	N71-23443*	c 09	NASA-CASE-XLE-02823	N71-23726*	c 14	NASA-CASE-XMF-05224
		US-PATENT-CLASS-321-2			US-PATENT-APPL-SN-491058			US-PATENT-APPL-SN-660842
		US-PATENT-3,470,443			US-PATENT-CLASS-310-10			US-PATENT-CLASS-73-189
N71-23240*	c 14	US-PATENT-3,433,818	N71-23449*	c 03	US-PATENT-3,393,332	N71-23755*	c 14	US-PATENT-3,465,584
		NASA-CASE-XMF-08217			NASA-CASE-XLE-08569			NASA-CASE-XMF-04134
		US-PATENT-APPL-SN-688807			US-PATENT-APPL-SN-641420			US-PATENT-APPL-SN-610723
N71-23240*	c 14	US-PATENT-CLASS-250-227	N71-23449*	c 03	US-PATENT-CLASS-136-89	N71-23755*	c 14	US-PATENT-CLASS-73-4
		US-PATENT-3,407,304			US-PATENT-CLASS-343-100			US-PATENT-3,472,059
		NASA-CASE-XLE-03629			US-PATENT-3,419,992			US-PATENT-3,472,059
N71-23248*	c 17	US-PATENT-APPL-SN-554950	N71-23497*	c 01	NASA-CASE-XLA-01486	N71-23790*	c 14	NASA-CASE-XAC-04885
		US-PATENT-CLASS-75-170			US-PATENT-APPL-SN-484485			US-PATENT-APPL-SN-573432
		US-PATENT-3,415,643			US-PATENT-CLASS-244-13			US-PATENT-CLASS-73-141
N71-23254*	c 15	US-PATENT-3,415,643	N71-23499*	c 06	US-PATENT-3,392,936	N71-23797*	c 14	US-PATENT-3,415,116
		NASA-CASE-XFR-05302			NASA-CASE-XNP-03835			NASA-CASE-XNP-06510
		US-PATENT-APPL-SN-685463			US-PATENT-APPL-SN-456874			US-PATENT-APPL-SN-562445
N71-23255*	c 15	US-PATENT-CLASS-85-7	N71-23500*	c 06	US-PATENT-CLASS-44-77	N71-23798* #	c 15	US-PATENT-CLASS-250-203
		US-PATENT-3,443,472			US-PATENT-3,393,059			US-PATENT-3,417,247
		NASA-CASE-XMS-07487			NASA-CASE-XNP-03250			NASA-CASE-XMF-02330
N71-23255*	c 15	US-PATENT-APPL-SN-580365	N71-23500*	c 06	US-PATENT-APPL-SN-485058	N71-23798* #	c 15	US-PATENT-APPL-SN-608944
		US-PATENT-CLASS-244-83			US-PATENT-CLASS-260-85.5			US-PATENT-CLASS-219-130
		US-PATENT-3,409,252			US-PATENT-3,419,537			US-PATENT-3,469,069
N71-23256*	c 15	NASA-CASE-XMF-03290	N71-23525*	c 09	NASA-CASE-XGS-02317	N71-23809*	c 15	NASA-CASE-XAC-10019
		US-PATENT-APPL-SN-479353			US-PATENT-APPL-SN-576183			US-PATENT-APPL-SN-686209
		US-PATENT-CLASS-53-22			US-PATENT-CLASS-328-61			US-PATENT-CLASS-74-89.18
N71-23267*	c 14	US-PATENT-3,415,032	N71-23527*	c 06	US-PATENT-3,464,018	N71-23810*	c 15	US-PATENT-3,472,086
		NASA-CASE-XLE-04026			NASA-CASE-XLE-01997			NASA-CASE-XLE-05033
		US-PATENT-APPL-SN-617770			US-PATENT-APPL-SN-427990			US-PATENT-APPL-SN-510474
N71-23268*	c 14	US-PATENT-CLASS-13-26	N71-23543*	c 10	US-PATENT-CLASS-23-230	N71-23811*	c 15	US-PATENT-CLASS-252-12
		US-PATENT-3,470,304			US-PATENT-3,472,625			US-PATENT-3,466,243
		NASA-CASE-XLA-01907			NASA-CASE-XMS-00913			NASA-CASE-XNP-05297
N71-23268*	c 14	US-PATENT-APPL-SN-335441	N71-23543*	c 10	US-PATENT-APPL-SN-416945	N71-23811*	c 15	US-PATENT-APPL-SN-640458
		US-PATENT-CLASS-356-72			US-PATENT-CLASS-317-31			US-PATENT-CLASS-72-354

N71-23812*	c 15	US-PATENT-3,443,412 NASA-CASE-XMF-07808 US-PATENT-APPL-SN-684178 US-PATENT-CLASS-308-2 US-PATENT-3,463,583	N71-24232*	c 14	US-PATENT-3,434,855 NASA-CASE-XAC-04458 US-PATENT-APPL-SN-534975 US-PATENT-CLASS-73-400 US-PATENT-3,392,586	N71-24623*	c 05	US-PATENT-CLASS-324-77 US-PATENT-3,548,107 NASA-CASE-XMS-09635 US-PATENT-APPL-SN-586329 US-PATENT-CLASS-2-2.1 US-PATENT-3,516,091
N71-23815*	c 15	NASA-CASE-XMF-07069 US-PATENT-APPL-SN-672382 US-PATENT-CLASS-219-125 US-PATENT-3,469,068	N71-24233*	c 14	NASA-CASE-XGS-04478 US-PATENT-APPL-SN-566717 US-PATENT-CLASS-73-88.5 US-PATENT-3,460,378	N71-24624*	c 07	NASA-CASE-GSC-10131-1 US-PATENT-APPL-SN-754055 US-PATENT-CLASS-340-172.5 US-PATENT-3,546,684
N71-23816*	c 15	NASA-CASE-XLE-03803 US-PATENT-APPL-SN-505765 US-PATENT-CLASS-220-9 US-PATENT-3,392,865	N71-24234*	c 14	NASA-CASE-XMF-10968 US-PATENT-APPL-SN-644447 US-PATENT-CLASS-73-15.6 US-PATENT-3,469,437	N71-24625*	c 07	NASA-CASE-XMS-09610 US-PATENT-APPL-SN-766170 US-PATENT-CLASS-343-113 US-PATENT-3,540,054
N71-23817*	c 15	NASA-CASE-XLE-06773 US-PATENT-APPL-SN-646124 US-PATENT-CLASS-72-487 US-PATENT-3,469,436	N71-24276*	c 33	NASA-CASE-XLA-02059 US-PATENT-APPL-SN-576182 US-PATENT-CLASS-165-12 US-PATENT-3,406,742	N71-24633*	c 08	NASA-CASE-NPO-10567 US-PATENT-APPL-SN-679055 US-PATENT-CLASS-235-153 US-PATENT-3,517,171
N71-23828*	c 17	NASA-CASE-XMF-02303 US-PATENT-APPL-SN-453229 US-PATENT-CLASS-148-6.20 US-PATENT-3,416,975	N71-24285*	c 32	NASA-CASE-XMF-02392 US-PATENT-APPL-SN-596735 US-PATENT-CLASS-73-49.2 US-PATENT-3,399,574	N71-24650*	c 08	NASA-CASE-NPO-10150 US-PATENT-APPL-SN-660843 US-PATENT-CLASS-340-347 US-PATENT-3,537,103
N71-23912*	c 31	NASA-CASE-XMF-05941 US-PATENT-APPL-SN-653277 US-PATENT-CLASS-244-1 US-PATENT-3,443,773	N71-24315*	c 31	NASA-CASE-XLA-04901 US-PATENT-APPL-SN-566325 US-PATENT-CLASS-244-1 US-PATENT-3,405,887	N71-24679*	c 15	NASA-CASE-XNP-10475 US-PATENT-APPL-SN-763868 US-PATENT-CLASS-72-369 US-PATENT-3,546,917
N71-23968*	c 28	NASA-CASE-XLE-04857 US-PATENT-APPL-SN-621742 US-PATENT-CLASS-239-127.1 US-PATENT-3,460,759	N71-24321*	c 28	NASA-CASE-XNP-03692 US-PATENT-APPL-SN-640787 US-PATENT-CLASS-60-263 US-PATENT-3,443,384	N71-24681*	c 03	NASA-CASE-XLE-08569-2 US-PATENT-APPL-SN-828825 US-PATENT-CLASS-29-572 US-PATENT-3,541,679
N71-23971*	c 32	NASA-CASE-XAC-05632 US-PATENT-APPL-SN-568355 US-PATENT-CLASS-244-77 US-PATENT-3,412,961	N71-24583*	c 07	NASA-CASE-NPO-10096 US-PATENT-APPL-SN-730700 US-PATENT-CLASS-329-140 US-PATENT-3,533,001	N71-24692*	c 12	NASA-CASE-XFR-02007 US-PATENT-APPL-SN-378080 US-PATENT-CLASS-73-389 US-PATENT-3,273,399
N71-23976*	c 23	NASA-CASE-XLA-01987 US-PATENT-APPL-SN-542713 US-PATENT-CLASS-346-107 US-PATENT-3,392,403	N71-24595*	c 09	NASA-CASE-GSC-10021-1 US-PATENT-APPL-SN-790420 US-PATENT-CLASS-343-7.5 US-PATENT-3,540,045	N71-24693*	c 14	NASA-CASE-XMF-04415 US-PATENT-APPL-SN-644446 US-PATENT-CLASS-33-174 US-PATENT-3,360,864
N71-24035*	c 31	NASA-CASE-XLA-01027 US-PATENT-APPL-SN-494283 US-PATENT-CLASS-52-272 US-PATENT-3,416,274	N71-24596*	c 09	NASA-CASE-XNP-01306-2 US-PATENT-APPL-SN-684083 US-PATENT-CLASS-328-133 US-PATENT-3,509,475	N71-24694*	c 15	NASA-CASE-GSC-10306-1 US-PATENT-APPL-SN-789278 US-PATENT-CLASS-248-358 US-PATENT-3,537,672
N71-24042*	c 15	NASA-CASE-XNP-04731 US-PATENT-APPL-SN-534966 US-PATENT-CLASS-103-48 US-PATENT-3,367,271	N71-24597*	c 09	NASA-CASE-ARC-10132-1 US-PATENT-APPL-SN-759460 US-PATENT-CLASS-73-398 US-PATENT-3,545,275	N71-24695*	c 15	NASA-CASE-XNP-06936 US-PATENT-APPL-SN-640786 US-PATENT-CLASS-318-382 US-PATENT-3,487,281
N71-24043*	c 15	NASA-CASE-XKS-03338 US-PATENT-APPL-SN-547072 US-PATENT-CLASS-89-1.806 US-PATENT-3,415,156	N71-24599*	c 15	NASA-CASE-MS-12052-1 US-PATENT-APPL-SN-770371 US-PATENT-CLASS-254-150 US-PATENT-CLASS-254-173 US-PATENT-CLASS-254-186 US-PATENT-3,545,725	N71-24696*	c 15	NASA-CASE-NPO-10173 US-PATENT-APPL-SN-796360 US-PATENT-CLASS-310-101 US-PATENT-3,535,570
N71-24044*	c 15	NASA-CASE-XMF-06888 US-PATENT-APPL-SN-591000 US-PATENT-CLASS-62-40 US-PATENT-3,415,069	N71-24600*	c 15	NASA-CASE-XGS-08718 US-PATENT-APPL-SN-785611 US-PATENT-CLASS-244-1 US-PATENT-CLASS-244-150 US-PATENT-CLASS-74-2 US-PATENT-CLASS-89-1.5 US-PATENT-CLASS-9-9 US-PATENT-3,540,676	N71-24717*	c 09	NASA-CASE-XMF-08804 US-PATENT-APPL-SN-683606 US-PATENT-CLASS-324-181 US-PATENT-3,543,159
N71-24045*	c 15	NASA-CASE-XGS-04548 US-PATENT-APPL-SN-672383 US-PATENT-CLASS-74-100 US-PATENT-3,480,397	N71-24605*	c 03	NASA-CASE-XNP-04758 US-PATENT-APPL-SN-557861 US-PATENT-CLASS-320-17 US-PATENT-3,413,536	N71-24718*	c 03	NASA-CASE-MS-10960-1 US-PATENT-APPL-SN-751198 US-PATENT-CLASS-204-305 US-PATENT-3,547,801
N71-24046*	c 15	NASA-CASE-XLE-10337 US-PATENT-APPL-SN-594633 US-PATENT-CLASS-252-26 US-PATENT-3,391,080	N71-24606*	c 05	NASA-CASE-XKS-10804 US-PATENT-APPL-SN-691909 US-PATENT-CLASS-35-17 US-PATENT-3,508,347	N71-24719*	c 03	NASA-CASE-GSC-10487-1 US-PATENT-APPL-SN-828983 US-PATENT-CLASS-320-39 US-PATENT-3,541,422
N71-24047*	c 15	NASA-CASE-XGS-03120 US-PATENT-APPL-SN-485958 US-PATENT-CLASS-156-3 US-PATENT-3,470,043	N71-24607*	c 06	NASA-CASE-XNP-09699 US-PATENT-APPL-SN-711972 US-PATENT-CLASS-73-17 US-PATENT-3,546,920	N71-24725*	c 23	NASA-CASE-GSC-10188-1 US-PATENT-APPL-SN-791888 US-PATENT-CLASS-62-384 US-PATENT-3,545,226
N71-24074*	c 16	NASA-CASE-XLA-03375 US-PATENT-APPL-SN-512562 US-PATENT-CLASS-356-104 US-PATENT-3,446,558	N71-24612*	c 07	NASA-CASE-XMF-06092 US-PATENT-APPL-SN-550088 US-PATENT-CLASS-178-7.1 US-PATENT-3,470,318	N71-24728*	c 05	NASA-CASE-MS-12243-1 US-PATENT-APPL-SN-857445 US-PATENT-CLASS-244-1 US-PATENT-3,537,668
N71-24142*	c 17	NASA-CASE-XLE-06969 US-PATENT-APPL-SN-655675 US-PATENT-CLASS-148-126 US-PATENT-3,463,679	N71-24613*	c 07	NASA-CASE-NPO-10851 US-PATENT-APPL-SN-805406 US-PATENT-CLASS-325-325 US-PATENT-3,551,816	N71-24729*	c 05	NASA-CASE-MS-13282-1 US-PATENT-APPL-SN-8498 US-PATENT-CLASS-128-2.1 US-PATENT-3,548,812
N71-24145*	c 33	NASA-CASE-XLE-03432 US-PATENT-APPL-SN-559349 US-PATENT-CLASS-13-35 US-PATENT-3,409,730	N71-24614*	c 07	NASA-CASE-XKS-09340 US-PATENT-APPL-SN-666555 US-PATENT-CLASS-343-703 US-PATENT-CLASS-499122 US-PATENT-CLASS-156-545 US-PATENT-3,416,988	N71-24730*	c 05	NASA-CASE-XMS-09637-1 US-PATENT-APPL-SN-785710 US-PATENT-CLASS-2-2.1 US-PATENT-3,537,107
N71-24147*	c 05	NASA-CASE-XMS-10269 US-PATENT-APPL-SN-590158 US-PATENT-CLASS-165-46 US-PATENT-3,425,486	N71-24618*	c 09	NASA-CASE-FRC-10029 US-PATENT-APPL-SN-760389 US-PATENT-CLASS-128-2.06 US-PATENT-3,547,105	N71-24736*	c 28	NASA-CASE-XLE-03157 US-PATENT-APPL-SN-591014 US-PATENT-CLASS-60-240 US-PATENT-3,408,816
N71-24164*	c 15	NASA-CASE-XLA-01494 US-PATENT-APPL-SN-499122 US-PATENT-CLASS-156-545 US-PATENT-3,416,988	N71-24621*	c 07	NASA-CASE-GSC-10118-1 US-PATENT-APPL-SN-783375 US-PATENT-CLASS-179-15 US-PATENT-CLASS-325-4 US-PATENT-CLASS-343-100 US-PATENT-3,546,386	N71-24738*	c 05	NASA-CASE-ARC-10100-1 US-PATENT-APPL-SN-797058 US-PATENT-CLASS-128-24 US-PATENT-CLASS-128-25 US-PATENT-3,550,585
N71-24170*	c 16	NASA-CASE-XLA-04295 US-PATENT-APPL-SN-546149 US-PATENT-CLASS-356-107 US-PATENT-3,468,609	N71-24622*	c 07	NASA-CASE-NPO-10388 US-PATENT-APPL-SN-725432 US-PATENT-CLASS-179-15	N71-24740*	c 06	NASA-CASE-XMF-03074 US-PATENT-APPL-SN-583595 US-PATENT-CLASS-260-72.5 US-PATENT-3,516,971
N71-24183*	c 18	NASA-CASE-XGS-04799 US-PATENT-APPL-SN-452944 US-PATENT-CLASS-106-84 US-PATENT-3,416,939				N71-24741*	c 07	NASA-CASE-NPO-10118
N71-24184*	c 18	NASA-CASE-XNP-02139 US-PATENT-APPL-SN-430777 US-PATENT-CLASS-106-84						

		US-PATENT-APPL-SN-704465			US-PATENT-APPL-SN-698630	N71-24910*	c 15	NASA-CASE-ERC-10045
		US-PATENT-CLASS-235-152			US-PATENT-CLASS-333-83			US-PATENT-APPL-SN-763685
		US-PATENT-3,541,314			US-PATENT-3,541,479			US-PATENT-CLASS-73-40.7
N71-24742*	c 07	NASA-CASE-NPO-10140	N71-24842*	c 09	NASA-CASE-MSC-12209	N71-24911*	c 17	NASA-CASE-XLE-04946
		US-PATENT-APPL-SN-691737			US-PATENT-APPL-SN-881039			US-PATENT-APPL-SN-605093
		US-PATENT-CLASS-187-7.1			US-PATENT-CLASS-343-797			US-PATENT-CLASS-118-308
N71-24750*	c 31	US-PATENT-3,541,250	N71-24843*	c 09	US-PATENT-3,546,705	N71-24934*	c 18	US-PATENT-3,472,202
		NASA-CASE-XGS-01654			NASA-CASE-XMF-06617			NASA-CASE-NPO-10051
		US-PATENT-APPL-SN-434148			US-PATENT-APPL-SN-856993			US-PATENT-APPL-SN-711898
		US-PATENT-CLASS-102-50			US-PATENT-CLASS-324-71			US-PATENT-CLASS-73-38
		US-PATENT-3,282,541			US-PATENT-3,541,439	N71-24948*	c 21	US-PATENT-3,548,633
N71-24798*	c 10	NASA-CASE-XLE-03061-1	N71-24844*	c 10	NASA-CASE-NPO-10169			NASA-CASE-ERC-10090
		US-PATENT-APPL-SN-632152			US-PATENT-APPL-SN-701733			US-PATENT-APPL-SN-811542
		US-PATENT-CLASS-340-412			US-PATENT-CLASS-328-171			US-PATENT-CLASS-343-112
		US-PATENT-3,546,694			US-PATENT-3,541,459	N71-24964*	c 11	US-PATENT-3,550,129
N71-24799*	c 10	NASA-CASE-XNP-06505	N71-24857*	c 23	NASA-CASE-XMS-06056-1			NASA-CASE-NPO-10141
		US-PATENT-APPL-SN-562933			US-PATENT-APPL-SN-532006			US-PATENT-APPL-SN-673227
		US-PATENT-CLASS-307-254			US-PATENT-CLASS-350-189			US-PATENT-CLASS-62-55.5
		US-PATENT-3,501,648			US-PATENT-3,472,577			US-PATENT-3,443,390
N71-24800*	c 09	NASA-CASE-ERC-10075	N71-24858*	c 33	NASA-CASE-MFS-14253	N71-24984*	c 15	NASA-CASE-MFS-14971
		US-PATENT-APPL-SN-775870			US-PATENT-APPL-SN-709622			US-PATENT-APPL-SN-827579
		US-PATENT-CLASS-321-45			US-PATENT-CLASS-161-69			US-PATENT-CLASS-74-468
		US-PATENT-3,539,905			US-PATENT-3,551,266			US-PATENT-3,541,875
N71-24803*	c 09	NASA-CASE-NPO-10242	N71-24861*	c 10	NASA-CASE-XMF-05195	N71-24985*	c 11	NASA-CASE-KSC-10126
		US-PATENT-APPL-SN-749181			US-PATENT-APPL-SN-785595			US-PATENT-APPL-SN-845973
		US-PATENT-CLASS-307-88			US-PATENT-CLASS-318-599			US-PATENT-CLASS-73-15
		US-PATENT-3,541,346			US-PATENT-3,523,228			US-PATENT-3,545,252
N71-24804*	c 09	NASA-CASE-GSC-10299-1	N71-24862*	c 10	NASA-CASE-FRC-10010	N71-25139*	c 10	NASA-CASE-MFS-10068
		US-PATENT-APPL-SN-836367			US-PATENT-APPL-SN-771937			US-PATENT-APPL-SN-700541
		US-PATENT-CLASS-343-100			US-PATENT-CLASS-307-235			US-PATENT-CLASS-321-9
		US-PATENT-3,540,050			US-PATENT-3,543,050			US-PATENT-3,487,288
N71-24805*	c 09	NASA-CASE-XMF-06892	N71-24863*	c 10	NASA-CASE-XMF-02966	N71-25213*	c 28	NASA-CASE-GSC-10709-1
		US-PATENT-APPL-SN-757875			US-PATENT-APPL-SN-560968			US-PATENT-APPL-SN-791288
		US-PATENT-CLASS-318-318			US-PATENT-CLASS-324-70			US-PATENT-CLASS-60-202
		US-PATENT-3,546,553			US-PATENT-3,406,336			US-PATENT-3,545,208
N71-24806*	c 09	NASA-CASE-NPO-10198	N71-24864*	c 14	NASA-CASE-XLE-04503	N71-25351*	c 33	NASA-CASE-MFS-14023
		US-PATENT-APPL-SN-723804			US-PATENT-APPL-SN-606463			US-PATENT-APPL-SN-795217
		US-PATENT-CLASS-328-165			US-PATENT-CLASS-250-225			US-PATENT-CLASS-161-161
		US-PATENT-3,550,023			US-PATENT-3,546,471			US-PATENT-CLASS-220-9
N71-24807*	c 09	NASA-CASE-MFS-14114-2	N71-24865*	c 15	NASA-CASE-XMF-05114-3			US-PATENT-CLASS-52-249
		US-PATENT-APPL-SN-854815			US-PATENT-APPL-SN-837378			US-PATENT-CLASS-52-404
		US-PATENT-CLASS-165-105			US-PATENT-CLASS-72-56			US-PATENT-CLASS-62-45
		US-PATENT-CLASS-165-107			US-PATENT-3,540,250			US-PATENT-3,540,615
		US-PATENT-CLASS-165-138	N71-24868*	c 23	NASA-CASE-ERC-10001	N71-25353*	c 33	NASA-CASE-MFS-20355
		US-PATENT-CLASS-310-4			US-PATENT-APPL-SN-712099			US-PATENT-APPL-SN-845974
		US-PATENT-3,537,515			US-PATENT-CLASS-350-310			US-PATENT-CLASS-165-104
N71-24808*	c 09	NASA-CASE-XNP-08880			US-PATENT-3,540,802			US-PATENT-CLASS-165-105
		US-PATENT-APPL-SN-605094	N71-24875*	c 15	NASA-CASE-XLA-06199			US-PATENT-CLASS-165-133
		US-PATENT-CLASS-333-98			US-PATENT-APPL-SN-702911			US-PATENT-CLASS-219-378
		US-PATENT-3,416,106			US-PATENT-CLASS-148-6.11			US-PATENT-CLASS-219-530
N71-24809*	c 14	NASA-CASE-XNP-08961	N71-24876*	c 33	NASA-CASE-XNP-05524			US-PATENT-CLASS-244-1
		US-PATENT-APPL-SN-661170			US-PATENT-APPL-SN-250567	N71-25360*	c 32	NASA-CASE-XLA-08530
		US-PATENT-CLASS-250-84			US-PATENT-CLASS-165-2			US-PATENT-APPL-SN-808577
		US-PATENT-3,487,216			US-PATENT-3,270,802			US-PATENT-CLASS-73-90
N71-24813*	c 31	NASA-CASE-XAC-06029-1	N71-24890*	c 08	NASA-CASE-XKS-06167			US-PATENT-3,546,931
		US-PATENT-APPL-SN-588651			US-PATENT-APPL-SN-649076	N71-25434*	c 31	NASA-CASE-MSC-13047-1
		US-PATENT-CLASS-343-100			US-PATENT-CLASS-235-155			US-PATENT-APPL-SN-850586
		US-PATENT-3,540,048			US-PATENT-3,535,497			US-PATENT-CLASS-244-1
N71-24828*	c 16	NASA-CASE-XAC-10770-1	N71-24891*	c 08	NASA-CASE-XNP-09759			US-PATENT-CLASS-244-113
		US-PATENT-APPL-SN-690997			US-PATENT-APPL-SN-606462			US-PATENT-CLASS-244-138
		US-PATENT-CLASS-356-28			US-PATENT-CLASS-235-92			US-PATENT-3,547,737
		US-PATENT-3,547,540	N71-24892*	c 09	NASA-CASE-NPO-10716	N71-25490*	c 26	NASA-CASE-ERC-10068
N71-24830*	c 17	NASA-CASE-XNP-04148			US-PATENT-APPL-SN-851394			US-PATENT-APPL-SN-760927
		US-PATENT-APPL-SN-536210			US-PATENT-CLASS-307-104			US-PATENT-CLASS-73-141
		US-PATENT-CLASS-204-38			US-PATENT-CLASS-317-123			US-PATENT-3,537,305
		US-PATENT-3,472,742			US-PATENT-CLASS-317-148.5	N71-25555*	c 24	NASA-CASE-XNP-09469
N71-24831*	c 16	NASA-CASE-NPO-10548			US-PATENT-3,549,955			US-PATENT-APPL-SN-645573
		US-PATENT-APPL-SN-775072			NASA-CASE-ERC-10125			US-PATENT-CLASS-204-168
		US-PATENT-CLASS-330-4	N71-24893*	c 09	US-PATENT-APPL-SN-773029			US-PATENT-3,540,989
		US-PATENT-3,486,123			US-PATENT-CLASS-323-56	N71-25865*	c 10	NASA-CASE-KSC-10002
N71-24832*	c 16	NASA-CASE-ERC-10178			US-PATENT-3,541,428			US-PATENT-APPL-SN-782956
		US-PATENT-APPL-SN-800973			NASA-CASE-XLA-07473			US-PATENT-CLASS-178-69.5
		US-PATENT-CLASS-331-94.5	N71-24895*	c 15	US-PATENT-APPL-SN-839935			US-PATENT-3,567,861
		US-PATENT-3,550,034			US-PATENT-CLASS-318-265	N71-25866*	c 09	NASA-CASE-ARC-10003-1
N71-24833*	c 15	NASA-CASE-XMF-03793			US-PATENT-3,546,552			US-PATENT-APPL-SN-717822
		US-PATENT-APPL-SN-453225			NASA-CASE-ERC-10034			US-PATENT-CLASS-178-66
		US-PATENT-CLASS-72-56			US-PATENT-APPL-SN-763706			US-PATENT-CLASS-179-100.2
		US-PATENT-3,360,972	N71-24896*	c 15	US-PATENT-CLASS-250-43.5			US-PATENT-3,549,799
N71-24834*	c 15	NASA-CASE-XNP-05634			US-PATENT-3,549,882	N71-25881*	c 18	NASA-CASE-XGS-05180
		US-PATENT-APPL-SN-605096			NASA-CASE-XLA-03538			US-PATENT-APPL-SN-721607
		US-PATENT-CLASS-73-95			US-PATENT-APPL-SN-749149			US-PATENT-CLASS-260-37
		US-PATENT-3,460,379			US-PATENT-CLASS-294-83			US-PATENT-3,567,677
N71-24835*	c 15	NASA-CASE-NPO-10123			US-PATENT-3,508,779	N71-25882*	c 10	NASA-CASE-GSC-10022-1
		US-PATENT-APPL-SN-731388			NASA-CASE-MFS-20395			US-PATENT-APPL-SN-785546
		US-PATENT-CLASS-128-272			US-PATENT-APPL-SN-830715			US-PATENT-CLASS-331-113
		US-PATENT-CLASS-128-275			US-PATENT-CLASS-285-314			US-PATENT-3,559,096
		US-PATENT-3,540,449			US-PATENT-CLASS-285-317	N71-25892*	c 14	NASA-CASE-XLA-04555-1
N71-24836*	c 15	NASA-CASE-XLE-08917-2			US-PATENT-CLASS-285-306			US-PATENT-APPL-SN-594584
		US-PATENT-APPL-SN-852131			US-PATENT-CLASS-354,792			US-PATENT-CLASS-148-13
		US-PATENT-CLASS-72-60			NASA-CASE-MFS-20385	N71-25899*	c 10	NASA-CASE-LEW-10345-1
		US-PATENT-3,541,825			US-PATENT-APPL-SN-853716			US-PATENT-APPL-SN-805298
N71-24840*	c 07	NASA-CASE-NPO-10649	N71-24904*	c 09	US-PATENT-CLASS-310-10			US-PATENT-CLASS-137-81.5
		US-PATENT-APPL-SN-795182			US-PATENT-3,541,361			US-PATENT-CLASS-235-201
		US-PATENT-CLASS-325-113						
		US-PATENT-3,541,450						
N71-24841*	c 09	NASA-CASE-XNP-09771						

N71-25900*	c 10	US-PATENT-3,568,702 NASA-CASE-ERC-10032 US-PATENT-APPL-SN-575857 US-PATENT-CLASS-333-30 US-PATENT-CLASS-333-72 US-PATENT-3,568,103	N71-26136*	c 14	US-PATENT-3,564,401 NASA-CASE-XLA-01782 US-PATENT-APPL-SN-576792 US-PATENT-CLASS-73-15.6 US-PATENT-3,472,080	N71-26293*	c 05	US-PATENT-APPL-SN-719870 US-PATENT-CLASS-325-67 US-PATENT-3,553,586 NASA-CASE-XFR-07658-1 US-PATENT-APPL-SN-586324 US-PATENT-CLASS-128-2.08 US-PATENT-3,426,748
N71-25901*	c 14	NASA-CASE-XLA-02810 US-PATENT-APPL-SN-764252 US-PATENT-CLASS-250-43.5 US-PATENT-CLASS-250-83.3 US-PATENT-CLASS-340-233 US-PATENT-CLASS-340-285 US-PATENT-3,569,710	N71-26137*	c 14	NASA-CASE-LAR-10305 US-PATENT-APPL-SN-811037 US-PATENT-CLASS-324-0.5 US-PATENT-CLASS-324-58.5 US-PATENT-3,562,631	N71-26294*	c 15	NASA-CASE-XNP-02862-1 US-PATENT-APPL-SN-556830 US-PATENT-CLASS-277-13 US-PATENT-3,468,548
N71-25903*	c 17	NASA-CASE-XLA-08986-1 US-PATENT-APPL-SN-570878 US-PATENT-CLASS-204-33 US-PATENT-3,468,785	N71-26142*	c 10	NASA-CASE-NPO-10302 US-PATENT-APPL-SN-848811 US-PATENT-CLASS-343-768 US-PATENT-3,553,704	N71-26312*	c 15	NASA-CASE-XNP-01263-2 US-PATENT-APPL-SN-718279 US-PATENT-CLASS-287-189.365 US-PATENT-3,481,838
N71-25914*	c 16	NASA-CASE-XLA-03410 US-PATENT-APPL-SN-512561 US-PATENT-CLASS-250-199 US-PATENT-3,469,087	N71-26145*	c 15	NASA-CASE-FRC-10005 US-PATENT-APPL-SN-756266 US-PATENT-CLASS-33-189 US-PATENT-3,562,919	N71-26326*	c 10	NASA-CASE-NPO-10143 US-PATENT-APPL-SN-692331 US-PATENT-CLASS-58-24 US-PATENT-3,472,019
N71-25917*	c 10	NASA-CASE-NPO-10595 US-PATENT-APPL-SN-771780 US-PATENT-CLASS-340-347 US-PATENT-3,569,956	N71-26148*	c 15	NASA-CASE-XMF-05114-2 US-PATENT-APPL-SN-837377 US-PATENT-CLASS-72-56 US-PATENT-3,555,867	N71-26331*	c 10	NASA-CASE-XNP-10854 US-PATENT-APPL-SN-688248 US-PATENT-CLASS-330-31 US-PATENT-3,482,179
N71-25929*	c 06	NASA-CASE-NPO-10596 US-PATENT-APPL-SN-756381 US-PATENT-CLASS-280-2.5 US-PATENT-3,557,027	N71-26153*	c 18	NASA-CASE-XLE-03940 US-PATENT-APPL-SN-539255 US-PATENT-CLASS-148-126 US-PATENT-3,472,709	N71-26333*	c 05	NASA-CASE-XMS-09652-1 US-PATENT-APPL-SN-618989 US-PATENT-CLASS-2-6 US-PATENT-3,473,165
N71-25950*	c 10	NASA-CASE-XGS-06226 US-PATENT-APPL-SN-676387 US-PATENT-CLASS-331-113 US-PATENT-3,466,570	N71-26154*	c 16	NASA-CASE-ERC-10020 US-PATENT-APPL-SN-708399 US-PATENT-CLASS-350-3.5 US-PATENT-3,540,790	N71-26334*	c 10	NASA-CASE-XLA-02819 US-PATENT-APPL-SN-796891 US-PATENT-CLASS-317-DIG.3 US-PATENT-CLASS-317-153 US-PATENT-CLASS-340-235 US-PATENT-3,575,641
N71-25975*	c 15	NASA-CASE-XMS-10680-1 US-PATENT-APPL-SN-797056 US-PATENT-CLASS-24-205.17 US-PATENT-3,469,289	N71-26155*	c 18	NASA-CASE-LAR-10373-1 US-PATENT-APPL-SN-781007 US-PATENT-CLASS-260-2.5 US-PATENT-3,481,887	N71-26339*	c 10	NASA-CASE-NPO-10185 US-PATENT-APPL-SN-723805 US-PATENT-CLASS-73-432 US-PATENT-3,472,080
N71-25999*	c 09	NASA-CASE-XGS-05290 US-PATENT-APPL-SN-754019 US-PATENT-CLASS-310-188 US-PATENT-CLASS-310-254 US-PATENT-CLASS-318-138 US-PATENT-CLASS-318-254 US-PATENT-3,569,804	N71-26161*	c 14	NASA-CASE-XLA-08254 US-PATENT-APPL-SN-867843 US-PATENT-CLASS-73-12 US-PATENT-CLASS-73-79 US-PATENT-3,576,127	N71-26346*	c 15	NASA-CASE-XLE-05841-1 US-PATENT-APPL-SN-605081 US-PATENT-CLASS-72-61 US-PATENT-3,481,700
N71-26000*	c 09	NASA-CASE-XNP-08567 US-PATENT-APPL-SN-840783 US-PATENT-CLASS-307-88 US-PATENT-3,466,459	N71-26162*	c 15	NASA-CASE-MSC-15474-1 US-PATENT-APPL-SN-878731 US-PATENT-CLASS-24-263 US-PATENT-3,564,564	N71-26374*	c 10	NASA-CASE-GSC-11367 US-PATENT-APPL-SN-675238 US-PATENT-CLASS-331-18 US-PATENT-3,484,712
N71-26002*	c 09	NASA-CASE-XMS-04213-1 US-PATENT-APPL-SN-607484 US-PATENT-CLASS-128-2.1 US-PATENT-3,468,303	N71-26173*	c 28	NASA-CASE-LEW-10689-1 US-PATENT-APPL-SN-830978 US-PATENT-CLASS-60-202 US-PATENT-3,552,125	N71-26387*	c 12	NASA-CASE-XLA-05541 US-PATENT-APPL-SN-700886 US-PATENT-CLASS-73-301 US-PATENT-3,473,379
N71-26084*	c 03	NASA-CASE-LEW-11358 US-PATENT-APPL-SN-787906 US-PATENT-CLASS-136-6 US-PATENT-3,554,806	N71-26181*	c 07	NASA-CASE-MSC-12223-1 US-PATENT-APPL-SN-839941 US-PATENT-CLASS-179-1 US-PATENT-3,555,182	N71-26414*	c 10	NASA-CASE-XMF-04958-1 US-PATENT-APPL-SN-448365 US-PATENT-CLASS-321-69 US-PATENT-3,434,037
N71-26085*	c 10	NASA-CASE-GSC-10735-1 US-PATENT-APPL-SN-883963 US-PATENT-CLASS-321-2 US-PATENT-3,559,031	N71-26182*	c 09	NASA-CASE-NPO-10625 US-PATENT-APPL-SN-856415 US-PATENT-CLASS-313-236 US-PATENT-CLASS-313-237 US-PATENT-CLASS-80-23 US-PATENT-3,562,575	N71-26415*	c 10	NASA-CASE-NPO-10003 US-PATENT-APPL-SN-638192 US-PATENT-CLASS-330-13 US-PATENT-3,481,393
N71-26092*	c 09	NASA-CASE-XNP-07477 US-PATENT-APPL-SN-605098 US-PATENT-CLASS-318-258 US-PATENT-3,501,884	N71-26185*	c 15	NASA-CASE-MFS-14711 US-PATENT-APPL-SN-774266 US-PATENT-CLASS-55-75 US-PATENT-3,557,534	N71-26418*	c 10	NASA-CASE-XGS-04224 US-PATENT-APPL-SN-568364 US-PATENT-CLASS-340-174 US-PATENT-3,483,535
N71-26100*	c 18	NASA-CASE-XLA-04251 US-PATENT-APPL-SN-677742 US-PATENT-CLASS-117-104 US-PATENT-3,553,002	N71-26189*	c 15	NASA-CASE-XLE-09527-2 US-PATENT-APPL-SN-840870 US-PATENT-CLASS-308-187 US-PATENT-3,561,828	N71-26434*	c 10	NASA-CASE-XNP-01466 US-PATENT-APPL-SN-487940 US-PATENT-CLASS-340-174 US-PATENT-3,481,437
N71-26101*	c 07	NASA-CASE-NPO-10231 US-PATENT-APPL-SN-701787 US-PATENT-CLASS-343-786 US-PATENT-3,534,376	N71-26199*	c 14	NASA-CASE-NPO-10691 US-PATENT-APPL-SN-816988 US-PATENT-CLASS-73-61 US-PATENT-3,566,676	N71-26474*	c 14	NASA-CASE-XMF-03844-1 US-PATENT-APPL-SN-601229 US-PATENT-CLASS-95-44 US-PATENT-3,472,140
N71-26102*	c 07	NASA-CASE-XNP-06611 US-PATENT-APPL-SN-593607 US-PATENT-CLASS-178-6.6 US-PATENT-3,474,192	N71-26206*	c 23	NASA-CASE-XGS-08269 US-PATENT-APPL-SN-787393 US-PATENT-CLASS-356-76 US-PATENT-3,554,647	N71-26475*	c 14	NASA-CASE-XNP-09701 US-PATENT-APPL-SN-584015 US-PATENT-CLASS-250-83.3 US-PATENT-3,481,290
N71-26103*	c 10	NASA-CASE-XNP-04623 US-PATENT-APPL-SN-510150 US-PATENT-CLASS-340-146.1 US-PATENT-3,474,413	N71-26243*	c 15	NASA-CASE-MSC-10959 US-PATENT-APPL-SN-725719 US-PATENT-CLASS-188-1 US-PATENT-3,420,338	N71-26531*	c 10	NASA-CASE-GSC-10413 US-PATENT-APPL-SN-789043 US-PATENT-CLASS-317-20 US-PATENT-CLASS-317-33 US-PATENT-3,555,361
N71-26110*	c 02	NASA-CASE-LAR-10249-1 US-PATENT-APPL-SN-835060 US-PATENT-CLASS-244-42 US-PATENT-3,576,301	N71-26244*	c 14	NASA-CASE-XMS-06497 US-PATENT-APPL-SN-617778 US-PATENT-CLASS-324-115 US-PATENT-3,464,012	N71-26537*	c 31	NASA-CASE-GSC-10556-1 NASA-CASE-GSC-10557-1 US-PATENT-APPL-SN-808193 US-PATENT-CLASS-244-1 US-PATENT-CLASS-308-1 US-PATENT-CLASS-74-5.12 US-PATENT-3,554,466
N71-26133*	c 09	NASA-CASE-MFS-20075 US-PATENT-APPL-SN-835059 US-PATENT-CLASS-317-101 US-PATENT-CLASS-339-17 US-PATENT-3,575,638	N71-26266*	c 14	NASA-CASE-XNP-09830 US-PATENT-APPL-SN-832165 US-PATENT-CLASS-324-0.5 US-PATENT-3,474,328	N71-26544*	c 10	NASA-CASE-NPO-10344 US-PATENT-APPL-SN-732921 US-PATENT-CLASS-340-347 US-PATENT-3,566,396
N71-26134*	c 15	NASA-CASE-XKS-07953 US-PATENT-APPL-SN-725405 US-PATENT-CLASS-51-170 US-PATENT-3,553,904	N71-26285*	c 18	NASA-CASE-MSC-12109 US-PATENT-APPL-SN-889376 US-PATENT-CLASS-112-402 US-PATENT-CLASS-2-275 US-PATENT-CLASS-2-81 US-PATENT-3,563,198	N71-26546*	c 12	NASA-CASE-FRC-10022 US-PATENT-APPL-SN-763729 US-PATENT-CLASS-73-184 US-PATENT-3,555,898
N71-26135*	c 14	NASA-CASE-XAC-03740 US-PATENT-APPL-SN-480211 US-PATENT-CLASS-324-43	N71-26291*	c 07	NASA-CASE-HQN-10541-1 US-PATENT-APPL-SN-494739 US-PATENT-CLASS-350-96 US-PATENT-3,556,634	N71-26577*	c 10	NASA-CASE-NPO-10214 US-PATENT-APPL-SN-704299 US-PATENT-CLASS-325-41
			N71-26292*	c 07	NASA-CASE-XKS-10543			



		US-PATENT-3,566,268			US-PATENT-APPL-SN-804172	N71-27094*	c 28	NASA-CASE-GSC-10710-1
N71-26579*	c 07	NASA-CASE-XMS-06740-1			US-PATENT-CLASS-313-63			US-PATENT-APPL-SN-828909
		US-PATENT-APPL-SN-554277			US-PATENT-CLASS-315-111			US-PATENT-CLASS-73-117.4
		US-PATENT-CLASS-178-6			US-PATENT-CLASS-60-202			US-PATENT-3,572,104
N71-26611*	c 15	US-PATENT-3,470,313	N71-26787*	c 09	US-PATENT-3,576,107	N71-27095*	c 28	NASA-CASE-MFS-20325
		NASA-CASE-MS-11817-1			US-PATENT-APPL-SN-752729			US-PATENT-APPL-SN-840176
		US-PATENT-APPL-SN-7668			US-PATENT-CLASS-240-11.2			US-PATENT-CLASS-244-1
		US-PATENT-CLASS-165-44			US-PATENT-CLASS-240-11.4			US-PATENT-3,572,610
		US-PATENT-CLASS-165-86			US-PATENT-CLASS-240-51.11	N71-27126* #	c 10	NASA-CASE-LEW-10233
		US-PATENT-CLASS-188-88			US-PATENT-CLASS-313-22			US-PATENT-APPL-SN-750787
		US-PATENT-CLASS-244-1			US-PATENT-CLASS-307-253			US-PATENT-CLASS-307-253
		US-PATENT-CLASS-244-57			US-PATENT-CLASS-307-300			US-PATENT-3,566,158
N71-26626*	c 10	US-PATENT-3,563,307	N71-26788*	c 14	NASA-CASE-MFS-20240	N71-27135*	c 15	NASA-CASE-HQN-10541-2
		NASA-CASE-GSC-10891-1			US-PATENT-APPL-SN-825259			US-PATENT-APPL-SN-822088
		US-PATENT-APPL-SN-568620			US-PATENT-CLASS-356-203			US-PATENT-CLASS-219-121
		US-PATENT-CLASS-307-53			US-PATENT-3,563,668			US-PATENT-CLASS-331-94.5
N71-26627*	c 14	US-PATENT-3,480,789	N71-27001*	c 09	NASA-CASE-XGS-11177			US-PATENT-3,571,555
		NASA-CASE-MFS-14017			US-PATENT-APPL-SN-828921	N71-27136*	c 10	NASA-CASE-GSC-10065-1
		US-PATENT-APPL-SN-762956			US-PATENT-CLASS-317-33			US-PATENT-APPL-SN-808462
		US-PATENT-CLASS-248-183			US-PATENT-CLASS-317-9			US-PATENT-CLASS-318-571
		US-PATENT-CLASS-308-9			US-PATENT-3,571,656			US-PATENT-CLASS-318-653
N71-26635*	c 15	US-PATENT-3,559,937	N71-27005*	c 14	NASA-CASE-MFS-20261			US-PATENT-3,568,028
		NASA-CASE-ERC-10022			US-PATENT-APPL-SN-845990	N71-27137*	c 10	NASA-CASE-XNP-06234
		US-PATENT-APPL-SN-874733			US-PATENT-CLASS-1			US-PATENT-APPL-SN-723827
		US-PATENT-CLASS-74-424.8			US-PATENT-CLASS-141-258			US-PATENT-CLASS-235-92
		US-PATENT-CLASS-74-89.15			US-PATENT-CLASS-222-137			US-PATENT-CLASS-328-49
N71-26642*	c 28	US-PATENT-3,576,135			US-PATENT-CLASS-222-49			US-PATENT-3,567,913
		NASA-CASE-LEW-10106-1	N71-27006*	c 15	NASA-CASE-LAR-10083-1	N71-27146*	c 15	NASA-CASE-LAR-10193-1
		US-PATENT-APPL-SN-758390			US-PATENT-APPL-SN-837825			US-PATENT-APPL-SN-794968
		US-PATENT-CLASS-60-202			US-PATENT-CLASS-73-147			US-PATENT-CLASS-188-1
N71-26654*	c 23	US-PATENT-3,552,124			US-PATENT-3,572,112			US-PATENT-CLASS-188-103
		NASA-CASE-NPO-10467	N71-27016*	c 09	NASA-CASE-GSC-11139			US-PATENT-3,568,805
		US-PATENT-APPL-SN-798277			US-PATENT-APPL-SN-756511	N71-27147*	c 15	NASA-CASE-MS-12121-1
		US-PATENT-CLASS-62-514			US-PATENT-CLASS-307-234			US-PATENT-APPL-SN-783374
N71-26672*	c 14	US-PATENT-3,564,866			US-PATENT-CLASS-307-246			US-PATENT-CLASS-91-390
		NASA-CASE-ERC-10033			US-PATENT-CLASS-307-273			US-PATENT-CLASS-91-461
		US-PATENT-APPL-SN-801660			US-PATENT-CLASS-328-120			US-PATENT-3,563,135
		US-PATENT-CLASS-73-49.3			US-PATENT-CLASS-330-30	N71-27169*	c 15	NASA-CASE-LAR-10106-1
N71-26673*	c 15	US-PATENT-3,559,460			US-PATENT-3,569,744			US-PATENT-APPL-SN-810575
		NASA-CASE-XAC-09489-1	N71-27036*	c 11	NASA-CASE-XNP-09770-3			US-PATENT-CLASS-188-1
		US-PATENT-APPL-SN-694246			US-PATENT-APPL-SN-863967			US-PATENT-CLASS-310-51
		US-PATENT-CLASS-356-154			US-PATENT-CLASS-74-18.2			US-PATENT-3,566,993
N71-26674*	c 19	US-PATENT-3,565,530			US-PATENT-CLASS-74-18.2	N71-27170*	c 18	NASA-CASE-XMF-02221
		NASA-CASE-XGS-04173			NASA-CASE-ERC-10113			US-PATENT-APPL-SN-430192
		US-PATENT-APPL-SN-658964	N71-27053*	c 09	US-PATENT-APPL-SN-865811			US-PATENT-CLASS-252-301.2
		US-PATENT-CLASS-350-285			US-PATENT-CLASS-323-48			US-PATENT-3,567,651
		US-PATENT-3,560,081			US-PATENT-CLASS-323-60	N71-27183*	c 16	NASA-CASE-HQN-10541-4
N71-26678*	c 09	NASA-CASE-ERC-10013			US-PATENT-3,571,699			US-PATENT-APPL-SN-822090
		US-PATENT-APPL-SN-802972	N71-27056*	c 07	NASA-CASE-MS-12205-1			US-PATENT-CLASS-250-199
		US-PATENT-CLASS-29-25.18			US-PATENT-APPL-SN-882577			US-PATENT-3,575,602
N71-26681*	c 32	US-PATENT-3,562,881			US-PATENT-CLASS-325-16	N71-27184*	c 15	NASA-CASE-XNP-08124
		NASA-CASE-LAR-10098			US-PATENT-CLASS-325-23			US-PATENT-APPL-SN-697075
		US-PATENT-APPL-SN-677475			US-PATENT-CLASS-325-369			US-PATENT-CLASS-75-63
		US-PATENT-CLASS-73-71.4			US-PATENT-CLASS-343-100			US-PATENT-3,563,727
N71-26701*	c 09	US-PATENT-3,564,906			US-PATENT-CLASS-343-117	N71-27185*	c 14	NASA-CASE-NPO-10556
		NASA-CASE-NPO-10331			US-PATENT-CLASS-343-176			US-PATENT-APPL-SN-796405
		US-PATENT-APPL-SN-757625			US-PATENT-3,568,197			US-PATENT-CLASS-73-71.6
		US-PATENT-CLASS-118-49.5	N71-27057*	c 08	NASA-CASE-XLA-07828			US-PATENT-3,572,089
		US-PATENT-CLASS-204-298			US-PATENT-APPL-SN-770209	N71-27186*	c 14	NASA-CASE-XMF-03968
N71-26721*	c 15	US-PATENT-3,556,048			US-PATENT-CLASS-318-20.105			US-PATENT-APPL-SN-719029
		NASA-CASE-LAR-10121-1			US-PATENT-CLASS-325-151.11			US-PATENT-CLASS-174-110.3
		US-PATENT-APPL-SN-766244			US-PATENT-CLASS-340-347DA			US-PATENT-CLASS-324-65
		US-PATENT-CLASS-18-6			US-PATENT-3,573,797			US-PATENT-CLASS-340-227
N71-26722*	c 23	US-PATENT-3,562,857	N71-27058*	c 14	NASA-CASE-MS-13276-1			US-PATENT-CLASS-60-35.6
		NASA-CASE-GSC-10216-1			US-PATENT-APPL-SN-880272			US-PATENT-3,569,828
		US-PATENT-APPL-SN-756260			US-PATENT-CLASS-219-505	N71-27191*	c 07	NASA-CASE-MFS-20068
		US-PATENT-CLASS-331-94.5			US-PATENT-3,575,585			US-PATENT-APPL-SN-797795
N71-26726*	c 03	US-PATENT-3,555,455			NASA-CASE-XKS-07814			US-PATENT-CLASS-174-28
		NASA-CASE-XNP-03413	N71-27067*	c 15	US-PATENT-APPL-SN-672384			US-PATENT-CLASS-333-85
		US-PATENT-APPL-SN-640456			US-PATENT-CLASS-182-10			US-PATENT-CLASS-333-96
		US-PATENT-CLASS-156-212			US-PATENT-CLASS-188-65.5			US-PATENT-CLASS-343-884
N71-26754*	c 06	US-PATENT-3,565,719			US-PATENT-3,568,795			US-PATENT-3,569,875
		NASA-CASE-XNP-09451	N71-27068*	c 15	NASA-CASE-NPO-10796	N71-27210*	c 08	NASA-CASE-GSC-10097-1
		US-PATENT-APPL-SN-713162			US-PATENT-APPL-SN-815760			US-PATENT-APPL-SN-762957
		US-PATENT-CLASS-23-253			US-PATENT-CLASS-220-46			US-PATENT-CLASS-179-100.2
N71-26772*	c 18	US-PATENT-3,560,161			US-PATENT-3,568,874			US-PATENT-CLASS-29-603
		NASA-CASE-XMF-07770-2	N71-27084*	c 15	NASA-CASE-NPO-10755			US-PATENT-CLASS-340-174.1
		US-PATENT-APPL-SN-711903			US-PATENT-APPL-SN-816733			US-PATENT-3,566,045
		US-PATENT-CLASS-106-296			US-PATENT-CLASS-417-50	N71-27214*	c 15	NASA-CASE-XLA-08911
N71-26773*	c 17	US-PATENT-3,576,656			US-PATENT-3,567,339			US-PATENT-APPL-SN-777764
		NASA-CASE-XNP-04262-2			NASA-CASE-XLA-08967			US-PATENT-CLASS-219-229
		US-PATENT-APPL-SN-684894	N71-27088*	c 02	US-PATENT-APPL-SN-837830			US-PATENT-CLASS-228-53
		US-PATENT-CLASS-75-66			US-PATENT-CLASS-244-90			US-PATENT-3,575,336
N71-26774*	c 14	US-PATENT-3,565,607			US-PATENT-3,570,789	N71-27215*	c 14	NASA-CASE-LAR-10204
		NASA-CASE-ERC-11020			NASA-CASE-ERC-10044-1			US-PATENT-APPL-SN-766245
		US-PATENT-APPL-SN-886248	N71-27090*	c 14	US-PATENT-APPL-SN-811892			US-PATENT-CLASS-235-92
		US-PATENT-CLASS-325-363			US-PATENT-CLASS-250-43.5R			US-PATENT-CLASS-356-106
N71-26779*	c 28	US-PATENT-3,564,420			US-PATENT-CLASS-250-83.6R			US-PATENT-3,572,935
		NASA-CASE-XLA-04126			US-PATENT-CLASS-324-33	N71-27232*	c 09	NASA-CASE-NPO-10607
		US-PATENT-APPL-SN-467820			US-PATENT-3,575,597			US-PATENT-APPL-SN-799353
		US-PATENT-CLASS-102-101			NASA-CASE-MFS-13929			US-PATENT-CLASS-250-83
		US-PATENT-CLASS-264-3	N71-27091*	c 15	US-PATENT-APPL-SN-779847			US-PATENT-CLASS-317-230
		US-PATENT-CLASS-86-1			US-PATENT-CLASS-152-225			US-PATENT-CLASS-317-231
		US-PATENT-CLASS-86-20.2			US-PATENT-CLASS-152-250			US-PATENT-CLASS-317-238
N71-26781*	c 28	US-PATENT-3,570,364			US-PATENT-3,568,748			US-PATENT-3,568,010
		NASA-CASE-LEW-10210-1						

N71-27233*	c 07	NASA-CASE-GSC-10220-1 US-PATENT-APPL-SN-759256 US-PATENT-CLASS-343-777 US-PATENT-CLASS-343-786 US-PATENT-CLASS-343-789 US-PATENT-CLASS-343-840 US-PATENT-CLASS-343-854 US-PATENT-3,568,876	US-PATENT-CLASS-324-61 US-PATENT-3,589,827	US-PATENT-APPL-SN-723488 US-PATENT-CLASS-204-30 US-PATENT-3,576,723
N71-27234*	c 05	NASA-CASE-XFR-07172 US-PATENT-APPL-SN-720041 US-PATENT-CLASS-128-2.05 US-PATENT-3,583,232	N71-27407* c 14 NASA-CASE-GSC-10376-1 US-PATENT-APPL-SN-806226 US-PATENT-CLASS-307-126 US-PATENT-CLASS-323-20 US-PATENT-3,566,143	N71-28729* c 18 NASA-CASE-LEW-10219-1 US-PATENT-APPL-SN-785780 US-PATENT-CLASS-148-126 US-PATENT-3,579,390
N71-27254*	c 06	NASA-CASE-NPO-10768 US-PATENT-APPL-SN-770398 US-PATENT-CLASS-260-615 US-PATENT-3,574,770	N71-27432* c 15 NASA-CASE-NPO-10808 US-PATENT-APPL-SN-808192 US-PATENT-CLASS-60-243 US-PATENT-3,568,447	N71-28739* c 10 NASA-CASE-XNP-01088 US-PATENT-APPL-SN-375680 US-PATENT-CLASS-307-88.5 US-PATENT-3,271,594
N71-27255*	c 08	NASA-CASE-NPO-12107 US-PATENT-APPL-SN-555189 US-PATENT-CLASS-179-100.2 US-PATENT-CLASS-340-148.1 US-PATENT-CLASS-340-172.5 US-PATENT-3,571,801	N71-27585* c 28 NASA-CASE-MFS-20130 US-PATENT-APPL-SN-809822 US-PATENT-CLASS-244-4 US-PATENT-3,570,785	N71-28740* c 15 NASA-CASE-XLA-08346 US-PATENT-APPL-SN-820964 US-PATENT-CLASS-356-150 US-PATENT-CLASS-356-152 US-PATENT-CLASS-356-153 US-PATENT-CLASS-73-147 US-PATENT-3,583,815
N71-27271*	c 10	NASA-CASE-XLA-03893 US-PATENT-APPL-SN-779024 US-PATENT-CLASS-331-109 US-PATENT-CLASS-331-117 US-PATENT-CLASS-331-177 US-PATENT-CLASS-332-30 US-PATENT-3,569,866	N71-27754* c 15 NASA-CASE-ARC-10131-1 US-PATENT-APPL-SN-808576 US-PATENT-CLASS-60-51 US-PATENT-CLASS-81-381 US-PATENT-CLASS-81-390 US-PATENT-CLASS-81-448 US-PATENT-3,568,572	N71-28741* c 12 NASA-CASE-XLE-09341 US-PATENT-APPL-SN-780065 US-PATENT-CLASS-137-81.5 US-PATENT-3,583,419
N71-27272*	c 10	NASA-CASE-XLA-08799 US-PATENT-APPL-SN-688242 US-PATENT-CLASS-340-150 US-PATENT-CLASS-340-164 US-PATENT-CLASS-340-166 US-PATENT-CLASS-340-213 US-PATENT-CLASS-340-403 US-PATENT-3,571,800	N71-27862* c 33 NASA-CASE-MFS-14114 US-PATENT-APPL-SN-706013 US-PATENT-CLASS-310-4 US-PATENT-3,535,562	N71-28747* c 17 NASA-CASE-XNP-08881 US-PATENT-APPL-SN-732822 US-PATENT-CLASS-161-89 US-PATENT-3,579,412
N71-27323*	c 14	NASA-CASE-NPO-10810 US-PATENT-APPL-SN-805405 US-PATENT-CLASS-250-83.3 US-PATENT-CLASS-73-355 US-PATENT-3,566,122	N71-28421* c 09 NASA-CASE-NPO-10412 US-PATENT-APPL-SN-768470 US-PATENT-CLASS-310-4 US-PATENT-3,578,992	N71-28759* c 22 NASA-CASE-LEW-10250-1 US-PATENT-APPL-SN-732455 US-PATENT-CLASS-176-45 US-PATENT-3,574,057
N71-27324*	c 21	NASA-CASE-GSC-10555-1 US-PATENT-APPL-SN-785620 US-PATENT-CLASS-244-1 US-PATENT-3,567,155	N71-28429* c 07 NASA-CASE-MSC-13201-1 US-PATENT-APPL-SN-789903 US-PATENT-CLASS-332-29 US-PATENT-CLASS-332-30 US-PATENT-3,579,147	N71-28779* c 11 NASA-CASE-XNP-00250 US-PATENT-APPL-SN-212497 US-PATENT-CLASS-181-5 US-PATENT-3,280,326
N71-27325*	c 14	NASA-CASE-GSC-10441-1 US-PATENT-APPL-SN-782544 US-PATENT-CLASS-324-43 US-PATENT-3,571,700	N71-28430* c 07 NASA-CASE-GSC-10668-1 US-PATENT-APPL-SN-743525 US-PATENT-CLASS-307-296 US-PATENT-CLASS-325-185 US-PATENT-CLASS-330-124 US-PATENT-CLASS-330-200 US-PATENT-CLASS-330-40 US-PATENT-3,577,092	N71-28783* c 10 NASA-CASE-XMS-02182 US-PATENT-APPL-SN-518153 US-PATENT-CLASS-317-100 US-PATENT-3,317,797
N71-27332*	c 12	NASA-CASE-NPO-10416 US-PATENT-APPL-SN-754020 US-PATENT-CLASS-137-81.5 US-PATENT-3,570,513	N71-28465* c 15 NASA-CASE-ERC-10097 US-PATENT-APPL-SN-797059 US-PATENT-CLASS-308-170 US-PATENT-3,583,777	N71-28807* c 06 NASA-CASE-XMF-08674 US-PATENT-APPL-SN-617775 US-PATENT-CLASS-280-47 US-PATENT-3,370,039
N71-27334*	c 14	NASA-CASE-ERC-10087 US-PATENT-APPL-SN-738315 US-PATENT-CLASS-29-588 US-PATENT-3,566,459	N71-28467* c 15 NASA-CASE-NPO-10646 US-PATENT-APPL-SN-813488 US-PATENT-CLASS-84-18 US-PATENT-3,574,277	N71-28808* c 06 NASA-CASE-XNP-04023 US-PATENT-APPL-SN-470802 US-PATENT-CLASS-260-429 US-PATENT-3,396,184
N71-27338*	c 10	NASA-CASE-KSC-10020 US-PATENT-APPL-SN-817482 US-PATENT-CLASS-324-103 US-PATENT-CLASS-324-107 US-PATENT-CLASS-324-133 US-PATENT-CLASS-340-248 US-PATENT-3,571,707	N71-28468* c 09 NASA-CASE-ARC-10137-1 US-PATENT-APPL-SN-799013 US-PATENT-CLASS-307-285 US-PATENT-CLASS-307-273 US-PATENT-CLASS-307-288 US-PATENT-CLASS-328-207 US-PATENT-3,584,311	N71-28809* c 07 NASA-CASE-XGS-02290 US-PATENT-APPL-SN-544895 US-PATENT-CLASS-343-771 US-PATENT-3,417,400
N71-27341*	c 07	NASA-CASE-NPO-10343 US-PATENT-APPL-SN-750786 US-PATENT-CLASS-178-7.1 US-PATENT-CLASS-178-7.3 US-PATENT-3,566,027	N71-28554* c 16 NASA-CASE-XGS-10518 US-PATENT-APPL-SN-764470 US-PATENT-CLASS-335-216 US-PATENT-3,541,486	N71-28810* c 09 NASA-CASE-XNP-03918 US-PATENT-APPL-SN-535304 US-PATENT-CLASS-331-113 US-PATENT-3,325,749
N71-27363*	c 06	NASA-CASE-HQN-10384 US-PATENT-APPL-SN-713616 US-PATENT-CLASS-280-2 US-PATENT-3,563,918	N71-28579* c 03 NASA-CASE-LEW-11359 US-PATENT-APPL-SN-787911 US-PATENT-CLASS-136-83 US-PATENT-3,573,986	N71-28849* c 28 NASA-CASE-XMS-04826 US-PATENT-APPL-SN-521755 US-PATENT-CLASS-60-258 US-PATENT-3,318,096
N71-27364*	c 09	NASA-CASE-ERC-10065 US-PATENT-APPL-SN-777818 US-PATENT-CLASS-321-81 US-PATENT-CLASS-321-84 US-PATENT-CLASS-322-32 US-PATENT-3,571,893	N71-28582* c 15 NASA-CASE-LEW-10278-1 US-PATENT-APPL-SN-760928 US-PATENT-CLASS-117-224 US-PATENT-3,573,977	N71-28850* c 28 NASA-CASE-XNP-01954 US-PATENT-APPL-SN-372730 US-PATENT-CLASS-313-230 US-PATENT-3,328,624
N71-27365*	c 10	NASA-CASE-NPO-10251 US-PATENT-APPL-SN-774265 US-PATENT-CLASS-35-19 US-PATENT-3,570,143	N71-28618* c 09 NASA-CASE-ERC-10098 US-PATENT-APPL-SN-779169 US-PATENT-CLASS-178-5.2R US-PATENT-CLASS-178-54CF US-PATENT-CLASS-178-54PE US-PATENT-3,582,980	N71-28851* c 31 NASA-CASE-XMS-06162 US-PATENT-APPL-SN-610724 US-PATENT-CLASS-244-138 US-PATENT-3,330,510
N71-27366*	c 10	NASA-CASE-GSC-10114-1 US-PATENT-APPL-SN-796370 US-PATENT-CLASS-317-33 US-PATENT-CLASS-321-12 US-PATENT-3,571,862	N71-28619* c 05 NASA-CASE-ARC-10153 US-PATENT-APPL-SN-783377 US-PATENT-CLASS-104-1 US-PATENT-CLASS-104-139 US-PATENT-CLASS-238-1 US-PATENT-CLASS-248-361 US-PATENT-CLASS-272-70 US-PATENT-CLASS-35-29 US-PATENT-3,583,322	N71-28852* c 33 NASA-CASE-XNP-01310 US-PATENT-APPL-SN-379771 US-PATENT-CLASS-60-266 US-PATENT-3,279,193
N71-27372*	c 15	NASA-CASE-NPO-10070 US-PATENT-APPL-SN-780064 US-PATENT-CLASS-23-259 US-PATENT-3,565,584	N71-28620* c 06 NASA-CASE-NPO-10701 US-PATENT-APPL-SN-763355 US-PATENT-CLASS-260-47 US-PATENT-3,576,786	N71-28859* c 10 NASA-CASE-XNP-01107 US-PATENT-APPL-SN-384010 US-PATENT-CLASS-330-51 US-PATENT-3,389,346
N71-27397*	c 18	NASA-CASE-XNP-02500 US-PATENT-APPL-SN-508169 US-PATENT-CLASS-324-58.5	N71-28629* c 11 NASA-CASE-KSC-10198 US-PATENT-APPL-SN-845971 US-PATENT-CLASS-73-15 US-PATENT-CLASS-73-432 US-PATENT-3,578,756	N71-28860* c 10 NASA-CASE-MSC-13492-1 US-PATENT-APPL-SN-53156 US-PATENT-CLASS-307-215 US-PATENT-CLASS-307-265 US-PATENT-CLASS-307-273 US-PATENT-CLASS-328-207 US-PATENT-CLASS-328-92 US-PATENT-3,577,014
			N71-28691* c 09 NASA-CASE-MFS-13687	N71-28863* c 14 NASA-CASE-ERC-10014 US-PATENT-APPL-SN-815367 US-PATENT-CLASS-250-41.9 US-PATENT-CLASS-250-49.5 US-PATENT-3,567,927
				N71-28866* c 09 NASA-CASE-MFS-14610 US-PATENT-APPL-SN-885571 US-PATENT-CLASS-318-317 US-PATENT-CLASS-318-331 US-PATENT-CLASS-318-345 US-PATENT-CLASS-318-504 US-PATENT-3,573,583
				N71-28892* c 33 NASA-CASE-XMF-05046 US-PATENT-APPL-SN-559350

		US-PATENT-CLASS-62-45			US-PATENT-APPL-SN-838630	N71-29128*	c 02	NASA-CASE-XAC-00048
		US-PATENT-3,365,897			US-PATENT-CLASS-250-219			US-PATENT-APPL-SN-765264
N71-28900*	c 07	NASA-CASE-XNP-02389			US-PATENT-CLASS-356-209			US-PATENT-CLASS-121-38
		US-PATENT-APPL-SN-516162			US-PATENT-3,574,470			US-PATENT-2,898,889
		US-PATENT-CLASS-343-100	N71-28994*	c 14	NASA-CASE-XER-11203	N71-29129*	c 03	NASA-CASE-XGS-01674
		US-PATENT-3,331,071			US-PATENT-APPL-SN-815366			US-PATENT-APPL-SN-248985
N71-28903*	c 33	NASA-CASE-XLA-01745			US-PATENT-CLASS-250-218			US-PATENT-CLASS-320-13
		US-PATENT-APPL-SN-538907			US-PATENT-CLASS-356-103			US-PATENT-3,118,100
		US-PATENT-CLASS-244-1			US-PATENT-3,578,867	N71-29131*	c 16	NASA-CASE-ERC-10151
		US-PATENT-3,409,247	N71-29008*	c 09	NASA-CASE-MSC-11277			US-PATENT-APPL-SN-853856
N71-28915*	c 28	NASA-CASE-LEW-10286-1			US-PATENT-APPL-SN-771759			US-PATENT-CLASS-350-3.5
		US-PATENT-APPL-SN-839994			US-PATENT-CLASS-317-155.5			US-PATENT-3,578,838
		US-PATENT-CLASS-431-352			US-PATENT-CLASS-317-33	N71-29132*	c 15	NASA-CASE-NPO-10431
		US-PATENT-CLASS-60-39.36			US-PATENT-CLASS-317-54			US-PATENT-APPL-SN-865329
		US-PATENT-CLASS-60-39.65			US-PATENT-CLASS-317-60			US-PATENT-CLASS-73-49.8
		US-PATENT-3,581,492			US-PATENT-3,579,041			US-PATENT-3,583,239
N71-28925*	c 08	NASA-CASE-XNP-01012	N71-29018*	c 15	NASA-CASE-XLA-08916	N71-29133*	c 15	NASA-CASE-MFS-20453
		US-PATENT-APPL-SN-369338			US-PATENT-APPL-SN-777765			US-PATENT-APPL-SN-885594
		US-PATENT-CLASS-340-174			US-PATENT-CLASS-29-421			US-PATENT-CLASS-29-278R
		US-PATENT-3,394,359			US-PATENT-3,583,058			US-PATENT-CLASS-294-15
N71-28926*	c 09	NASA-CASE-XMS-03542	N71-29032*	c 15	NASA-CASE-XMF-05999			US-PATENT-CLASS-339-17R
		US-PATENT-APPL-SN-482952			US-PATENT-APPL-SN-752946			US-PATENT-CLASS-81-3R
		US-PATENT-CLASS-307-263			US-PATENT-CLASS-117-212			US-PATENT-3,583,744
		US-PATENT-3,364,366			US-PATENT-3,576,669	N71-29134*	c 14	NASA-CASE-MFS-11204
N71-28928*	c 28	NASA-CASE-XNP-00816	N71-29033*	c 08	NASA-CASE-GSC-10554-1			US-PATENT-APPL-SN-845991
		US-PATENT-APPL-SN-235588			US-PATENT-APPL-SN-828984			US-PATENT-CLASS-73-1R
		US-PATENT-CLASS-253-77			US-PATENT-CLASS-235-150.1			US-PATENT-CLASS-73-304C
		US-PATENT-3,202,398			US-PATENT-CLASS-235-150.2			US-PATENT-3,578,755
N71-28929*	c 27	NASA-CASE-XNP-00650			US-PATENT-CLASS-235-150.27	N71-29135*	c 10	NASA-CASE-GSC-10564
		US-PATENT-APPL-SN-271823			US-PATENT-CLASS-235-151.1			US-PATENT-APPL-SN-292596
		US-PATENT-CLASS-60-39.48			US-PATENT-3,578,957			US-PATENT-CLASS-340-174
		US-PATENT-3,170,295	N71-29034*	c 08	NASA-CASE-NPO-11088			US-PATENT-3,348,218
N71-28933*	c 14	NASA-CASE-XLA-08913			US-PATENT-APPL-SN-887701	N71-29136*	c 15	NASA-CASE-XLA-00013
		US-PATENT-APPL-SN-865109			US-PATENT-CLASS-307-207			US-PATENT-APPL-SN-579121
		US-PATENT-CLASS-204-263			US-PATENT-CLASS-307-222			US-PATENT-CLASS-308-177
		US-PATENT-3,574,084			US-PATENT-CLASS-328-167			US-PATENT-2,903,307
N71-28935*	c 14	NASA-CASE-LAR-10686			US-PATENT-CLASS-328-44	N71-29137*	c 17	NASA-CASE-XNP-04339
		US-PATENT-APPL-SN-280362			US-PATENT-3,579,122			US-PATENT-APPL-SN-451596
		US-PATENT-CLASS-226-58	N71-29035*	c 09	NASA-CASE-LEW-10155-1			US-PATENT-CLASS-264-111
		US-PATENT-3,298,582			US-PATENT-APPL-SN-889387			US-PATENT-3,413,393
N71-28936*	c 15	NASA-CASE-XMS-10993			US-PATENT-CLASS-337-114	N71-29138*	c 08	NASA-CASE-ERC-10041
		US-PATENT-APPL-SN-660573			US-PATENT-CLASS-337-121			US-PATENT-APPL-SN-889478
		US-PATENT-CLASS-244-1			US-PATENT-3,579,168			US-PATENT-CLASS-307-234
		US-PATENT-3,389,877	N71-29040*	c 18	NASA-CASE-XLE-10910			US-PATENT-CLASS-307-265
N71-28937*	c 15	NASA-CASE-XNP-01855			US-PATENT-APPL-SN-751061			US-PATENT-CLASS-324-106
		US-PATENT-APPL-SN-408435			US-PATENT-CLASS-148-6			US-PATENT-CLASS-328-58
		US-PATENT-CLASS-285-45			US-PATENT-3,573,996			US-PATENT-CLASS-332-10
		US-PATENT-3,219,365	N71-29041*	c 14	NASA-CASE-XLA-10402			US-PATENT-CLASS-332-9R
N71-28951*	c 15	NASA-CASE-XNP-02278			US-PATENT-APPL-SN-762935	N71-29139*	c 09	NASA-CASE-XLA-07788
		US-PATENT-APPL-SN-11853			US-PATENT-CLASS-356-76			US-PATENT-APPL-SN-874732
		US-PATENT-CLASS-60-35.55			US-PATENT-3,574,462			US-PATENT-CLASS-307-215
		US-PATENT-3,132,479	N71-29044*	c 03	NASA-CASE-XMS-02063			US-PATENT-CLASS-307-247
N71-28952*	c 15	NASA-CASE-XAC-00001			US-PATENT-APPL-SN-422096			US-PATENT-CLASS-307-265
		US-PATENT-APPL-SN-612568			US-PATENT-CLASS-136-86			US-PATENT-CLASS-307-273
		US-PATENT-CLASS-318-31			US-PATENT-3,382,105			US-PATENT-CLASS-307-294
		US-PATENT-2,837,706	N71-29046*	c 33	NASA-CASE-XHQ-03673			US-PATENT-CLASS-328-207
N71-28958*	c 14	NASA-CASE-XNP-02792			US-PATENT-APPL-SN-559055			US-PATENT-3,578,988
		US-PATENT-APPL-SN-262596			US-PATENT-CLASS-165-86	N71-29151*	c 33	NASA-CASE-XLE-00035
		US-PATENT-CLASS-219-413			US-PATENT-3,347,309			US-PATENT-APPL-SN-575291
		US-PATENT-3,197,616	N71-29049*	c 23	NASA-CASE-XNP-06503			US-PATENT-CLASS-204-37
N71-28959*	c 15	NASA-CASE-XNP-01848			US-PATENT-APPL-SN-370989			US-PATENT-2,926,123
		US-PATENT-APPL-SN-359532			US-PATENT-CLASS-335-216	N71-29152*	c 33	NASA-CASE-XLE-00027
		US-PATENT-CLASS-64-27			US-PATENT-3,273,094			US-PATENT-APPL-SN-529594
		US-PATENT-3,236,066	N71-29050*	c 31	NASA-CASE-HQN-00836			US-PATENT-CLASS-253-39.1
N71-28960*	c 10	NASA-CASE-XNP-00745			US-PATENT-APPL-SN-862921			US-PATENT-2,956,772
		US-PATENT-APPL-SN-314570			US-PATENT-CLASS-244-1	N71-29153*	c 28	NASA-CASE-MFS-20831
		US-PATENT-CLASS-328-67			US-PATENT-3,396,920			US-PATENT-APPL-SN-238421
		US-PATENT-3,252,100	N71-29051*	c 33	NASA-CASE-XMF-04208			US-PATENT-CLASS-60-35.54
N71-28963*	c 16	NASA-CASE-XLA-01090			US-PATENT-APPL-SN-428887			US-PATENT-3,212,259
		US-PATENT-APPL-SN-274065			US-PATENT-CLASS-73-190	N71-29154*	c 28	NASA-CASE-XLE-00155
		US-PATENT-CLASS-250-199			US-PATENT-3,372,588			US-PATENT-APPL-SN-348600
		US-PATENT-3,215,842	N71-29052*	c 33	NASA-CASE-MSC-12389			US-PATENT-CLASS-253-77
N71-28965* #	c 07	NASA-CASE-GSC-10949-1			US-PATENT-APPL-SN-229286			US-PATENT-2,997,274
		US-PATENT-APPL-SN-94369			US-PATENT-CLASS-165-47	N71-29155*	c 27	NASA-CASE-MSC-12390
N71-28979*	c 07	NASA-CASE-HQN-00937			US-PATENT-3,212,564			US-PATENT-APPL-SN-231520
		US-PATENT-APPL-SN-343760			US-PATENT-CLASS-60-938			US-PATENT-CLASS-222-61
		US-PATENT-CLASS-343-823			US-PATENT-APPL-SN-300957			US-PATENT-3,286,882
		US-PATENT-3,299,431			US-PATENT-CLASS-60-267	N71-29156*	c 26	NASA-CASE-XNP-01961
N71-28980*	c 07	NASA-CASE-XLA-10772			US-PATENT-3,298,175			US-PATENT-APPL-SN-442835
		US-PATENT-APPL-SN-887700	N71-29065*	c 07	NASA-CASE-ERC-10011			US-PATENT-CLASS-148-174
		US-PATENT-CLASS-343-708			US-PATENT-APPL-SN-802818			US-PATENT-3,397,094
		US-PATENT-CLASS-343-784			US-PATENT-CLASS-333-81	N71-29184*	c 25	NASA-CASE-XLA-00327
		US-PATENT-CLASS-343-872			US-PATENT-CLASS-350-1			US-PATENT-APPL-SN-199199
		US-PATENT-3,579,242			US-PATENT-CLASS-350-286			US-PATENT-CLASS-315-111
N71-28991*	c 14	NASA-CASE-XLA-06713			US-PATENT-3,574,438			US-PATENT-3,238,413
		US-PATENT-APPL-SN-863913	N71-29123*	c 23	NASA-CASE-XNP-08907	N71-30026*	c 14	NASA-CASE-MFS-20096
		US-PATENT-CLASS-324-5			US-PATENT-APPL-SN-824042			US-PATENT-APPL-SN-435433
		US-PATENT-CLASS-342-73			US-PATENT-CLASS-350-102			US-PATENT-CLASS-73-432
		US-PATENT-CLASS-340-347AD			US-PATENT-CLASS-350-288			US-PATENT-3,396,584
		US-PATENT-3,579,103			US-PATENT-CLASS-350-310	N71-30027*	c 23	NASA-CASE-GSC-10777
N71-28992*	c 14	NASA-CASE-ERC-10150			US-PATENT-3,574,448			US-PATENT-APPL-SN-311387
		US-PATENT-APPL-SN-822519	N71-29125*	c 23	NASA-CASE-NPO-11087			US-PATENT-CLASS-350-2
		US-PATENT-CLASS-250-41.95			US-PATENT-APPL-SN-840359			US-PATENT-3,394,975
		US-PATENT-CLASS-73-40.7			US-PATENT-CLASS-331-94.5	N71-30028*	c 15	NASA-CASE-MFS-20830
		US-PATENT-3,578,758			US-PATENT-CLASS-356-153			US-PATENT-APPL-SN-286620
N71-28993*	c 14	NASA-CASE-MFS-20044			US-PATENT-3,574,467			

N71-30285*	c 14	US-PATENT-3,262,395 NASA-CASE-HQN-10780 US-PATENT-APPL-SN-247136 US-PATENT-CLASS-73-497 US-PATENT-3,270,565	N71-30292*	c 23	US-PATENT-APPL-SN-86018 US-PATENT-3,239,600 NASA-CASE-KSC-101064 US-PATENT-APPL-SN-782955 US-PATENT-CLASS-179-1R US-PATENT-CLASS-179-1VC US-PATENT-3,588,359	N71-33108*	c 07	NASA-CASE-ARC-10101-1 US-PATENT-APPL-SN-793823 US-PATENT-CLASS-307-251 US-PATENT-CLASS-307-261 US-PATENT-CLASS-321-47 US-PATENT-3,588,671	N71-33109*	c 09	NASA-CASE-GSC-10186 US-PATENT-APPL-SN-713188 US-PATENT-CLASS-235-164 US-PATENT-CLASS-235-175 US-PATENT-3,588,483	N71-33110*	c 08	NASA-CASE-GSC-10667-1 US-PATENT-APPL-SN-749548 US-PATENT-CLASS-330-11 US-PATENT-CLASS-330-16 US-PATENT-CLASS-330-24 US-PATENT-3,585,514	N71-33129*	c 10	NASA-CASE-XLA-04063 US-PATENT-APPL-SN-802948 US-PATENT-CLASS-179-1 US-PATENT-CLASS-244-1 US-PATENT-CLASS-244-83 US-PATENT-3,586,261	N71-33160*	c 31	NASA-CASE-NPO-10468 US-PATENT-APPL-SN-787846 US-PATENT-CLASS-350-310 US-PATENT-CLASS-350-55 US-PATENT-3,588,220	N71-33229*	c 23	NASA-CASE-NPO-10342 US-PATENT-APPL-SN-704446 US-PATENT-CLASS-178-69.5 US-PATENT-CLASS-179-15BS US-PATENT-CLASS-340-347DD US-PATENT-3,588,883	N71-33407*	c 10	NASA-CASE-LEW-10327 US-PATENT-APPL-SN-772006 US-PATENT-CLASS-148-6.3 US-PATENT-3,591,426	N71-33408*	c 17	NASA-CASE-ARC-10050 US-PATENT-APPL-SN-787219 US-PATENT-CLASS-136-89 US-PATENT-3,591,420	N71-33409*	c 03	NASA-CASE-NPO-10417 US-PATENT-APPL-SN-753974 US-PATENT-CLASS-331-94.5 US-PATENT-CLASS-352-84 US-PATENT-CLASS-95-11 US-PATENT-3,587,424	N71-33410*	c 16	NASA-CASE-XLA-03661 US-PATENT-APPL-SN-751266 US-PATENT-CLASS-408-137 US-PATENT-CLASS-90-11 US-PATENT-3,585,882	N71-33518*	c 15	NASA-CASE-ERC-10100 US-PATENT-APPL-SN-766697 US-PATENT-CLASS-313-109.5 US-PATENT-CLASS-313-231 US-PATENT-CLASS-315-108 US-PATENT-CLASS-315-111 US-PATENT-CLASS-340-324 US-PATENT-CLASS-340-336 US-PATENT-3,588,874	N71-33519*	c 09	NASA-CASE-NPO-11031 US-PATENT-APPL-SN-864097 US-PATENT-CLASS-333-21A US-PATENT-CLASS-333-6 US-PATENT-CLASS-333-7 US-PATENT-3,588,751	N71-33612*	c 11	NASA-CASE-XLA-09480 US-PATENT-APPL-SN-874435 US-PATENT-CLASS-73-147 US-PATENT-3,587,306	N71-33613*	c 07	NASA-CASE-NPO-10700 US-PATENT-APPL-SN-840308 US-PATENT-CLASS-318-227 US-PATENT-CLASS-318-230 US-PATENT-3,588,648	N71-33696*	c 07	NASA-CASE-MS-12165-1 US-PATENT-APPL-SN-875849 US-PATENT-CLASS-325-347 US-PATENT-CLASS-325-348 US-PATENT-CLASS-325-473 US-PATENT-CLASS-325-478	US-PATENT-CLASS-325-480 US-PATENT-CLASS-325-482 US-PATENT-CLASS-328-164 US-PATENT-CLASS-328-165 US-PATENT-CLASS-329-145 US-PATENT-3,588,705	N71-34044* #	c 03	NASA-CASE-NPO-11190 US-PATENT-APPL-SN-115944	N71-34212* #	c 09	NASA-CASE-MFS-20935 US-PATENT-APPL-SN-136007	N71-34389* #	c 14	NASA-CASE-HQN-10683 US-PATENT-APPL-SN-146217	N72-10138* #	c 06	NASA-CASE-HQN-10537-1 US-PATENT-APPL-SN-112366	N72-10375* #	c 14	NASA-CASE-GSC-11095-1 US-PATENT-APPL-SN-147940	N72-11018* #	c 02	NASA-CASE-LAR-10557 US-PATENT-APPL-SN-853746 US-PATENT-CLASS-416-115 US-PATENT-CLASS-416-121 US-PATENT-CLASS-416-127 US-PATENT-CLASS-416-130 US-PATENT-CLASS-416-149 US-PATENT-CLASS-416-200 US-PATENT-3,592,559	N72-11062* #	c 03	NASA-CASE-XGS-04047-2 US-PATENT-APPL-SN-843251 US-PATENT-CLASS-136-206 US-PATENT-3,597,261	N72-11084* #	c 05	NASA-CASE-NPO-10677 US-PATENT-APPL-SN-868530 US-PATENT-CLASS-62-467 US-PATENT-CLASS-62-56 US-PATENT-3,599,443	N72-11085* #	c 05	NASA-CASE-MS-13140 US-PATENT-APPL-SN-796358 US-PATENT-CLASS-285-410 US-PATENT-CLASS-297-232 US-PATENT-CLASS-297-68 US-PATENT-CLASS-5-69 US-PATENT-3,592,505	N72-11148* #	c 07	NASA-CASE-NPO-10301 US-PATENT-APPL-SN-848810 US-PATENT-CLASS-343-771 US-PATENT-CLASS-343-853 US-PATENT-3,599,216	N72-11149* #	c 07	NASA-CASE-GSC-10390-1 US-PATENT-APPL-SN-749121 US-PATENT-CLASS-325-39 US-PATENT-CLASS-325-4 US-PATENT-CLASS-325-58 US-PATENT-CLASS-343-179 US-PATENT-CLASS-343-50P US-PATENT-CLASS-343-7.5 US-PATENT-3,593,138	N72-11150* #	c 07	NASA-CASE-NPO-11064 US-PATENT-APPL-SN-880248 US-PATENT-CLASS-331-10 US-PATENT-CLASS-331-34 US-PATENT-CLASS-331-66 US-PATENT-CLASS-331-7 US-PATENT-3,593,180	N72-11171* #	c 06	NASA-CASE-NPO-10769 US-PATENT-APPL-SN-813494 US-PATENT-CLASS-179-15.55R US-PATENT-3,598,921	N72-11172* #	c 06	NASA-CASE-GSC-10860-1 US-PATENT-APPL-SN-831118 US-PATENT-CLASS-235-61NV US-PATENT-CLASS-33-15A US-PATENT-CLASS-33-204C US-PATENT-3,599,335	N72-11224* #	c 09	NASA-CASE-GSC-10614-1 US-PATENT-APPL-SN-822534 US-PATENT-CLASS-179-100-2CA US-PATENT-CLASS-179-100-2MD US-PATENT-CLASS-274-4R US-PATENT-3,592,478	N72-11225* #	c 09	NASA-CASE-KSC-10182 US-PATENT-APPL-SN-817481 US-PATENT-CLASS-324-102 US-PATENT-CLASS-324-119 US-PATENT-CLASS-324-123R US-PATENT-3,593,132	N72-11256* #	c 10	NASA-CASE-ARC-10042-2 US-PATENT-APPL-SN-33159 US-PATENT-CLASS-330-107 US-PATENT-CLASS-330-109 US-PATENT-3,593,175	N72-11363* #	c 14	NASA-CASE-MS-11847-1 US-PATENT-APPL-SN-8497 US-PATENT-CLASS-73-149 US-PATENT-CLASS-73-290B US-PATENT-3,596,510	N72-11364* #	c 14	NASA-CASE-NPO-10778 US-PATENT-APPL-SN-865909	N72-11365* #	c 14	NASA-CASE-MFS-20485 US-PATENT-APPL-SN-22320 US-PATENT-CLASS-250-43.5FC US-PATENT-CLASS-73-194F US-PATENT-3,599,489	N72-11385* #	c 15	NASA-CASE-MFS-18495 US-PATENT-APPL-SN-38814 US-PATENT-CLASS-24-211N US-PATENT-CLASS-85-5B US-PATENT-3,596,554	N72-11386* #	c 15	NASA-CASE-MFS-20249 US-PATENT-APPL-SN-794530 US-PATENT-CLASS-248-183 US-PATENT-CLASS-248-278 US-PATENT-CLASS-248-487 US-PATENT-CLASS-33-72 US-PATENT-CLASS-350-285 US-PATENT-CLASS-350-287 US-PATENT-3,596,863	N72-11387* #	c 15	NASA-CASE-XMF-09902 US-PATENT-APPL-SN-769665 US-PATENT-CLASS-75-20F US-PATENT-3,592,628	N72-11388* #	c 15	NASA-CASE-MFS-20423 US-PATENT-APPL-SN-865298 US-PATENT-CLASS-212-134 US-PATENT-CLASS-308-5 US-PATENT-3,600,046	N72-11389* #	c 15	NASA-CASE-XLA-05056 US-PATENT-APPL-SN-586733 US-PATENT-CLASS-210-445 US-PATENT-3,592,768	N72-11390* #	c 15	NASA-CASE-MFS-18100 US-PATENT-APPL-SN-784055 US-PATENT-CLASS-15-143 US-PATENT-CLASS-15-210 US-PATENT-3,591,885	N72-11391* #	c 15	NASA-CASE-NPO-11012 US-PATENT-APPL-SN-845807 US-PATENT-CLASS-248-18 US-PATENT-CLASS-248-20 US-PATENT-3,592,422	N72-11392* #	c 15	NASA-CASE-MFS-20299 US-PATENT-APPL-SN-889437 US-PATENT-CLASS-156-320 US-PATENT-CLASS-156-66 US-PATENT-CLASS-219-221 US-PATENT-CLASS-219-243 US-PATENT-3,593,001	N72-11568* #	c 23	NASA-CASE-GSC-11133-1 US-PATENT-APPL-SN-121328	N72-11595* #	c 24	NASA-CASE-MFS-20095 US-PATENT-APPL-SN-855004 US-PATENT-CLASS-250-49.5E US-PATENT-CLASS-250-49.5TE US-PATENT-CLASS-250-52 US-PATENT-CLASS-250-52 US-PATENT-3,593,024	N72-11708* #	c 28	NASA-CASE-MFS-20619 US-PATENT-APPL-SN-18982 US-PATENT-CLASS-139-425R US-PATENT-CLASS-239-265.19 US-PATENT-CLASS-239-265.43 US-PATENT-CLASS-60-271 US-PATENT-3,596,465	N72-11709* #	c 28	NASA-CASE-NPO-10737 US-PATENT-APPL-SN-760114 US-PATENT-CLASS-60-202 US-PATENT-CLASS-60-39-48 US-PATENT-3,591,967	N72-12080* #	c 07	NASA-CASE-GSC-10087-3 US-PATENT-APPL-SN-880885 US-PATENT-CLASS-325-4 US-PATENT-CLASS-343-6.5R US-PATENT-CLASS-343-6.8R US-PATENT-3,594,790	N72-12081* #	c 07	NASA-CASE-GSC-10185-1 US-PATENT-APPL-SN-733039 US-PATENT-CLASS-178-DIG.12 US-PATENT-CLASS-178-6 US-PATENT-CLASS-178-7.3 US-PATENT-CLASS-325-10 US-PATENT-CLASS-325-13 US-PATENT-3,588,331	N72-12136* #	c 09	NASA-CASE-XER-09521 US-PATENT-APPL-SN-771530 US-PATENT-CLASS-136-202 US-PATENT-CLASS-136-206 US-PATENT-CLASS-136-227 US-PATENT-CLASS-343-DIG.3
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		US-PATENT-CLASS-343-720			US-PATENT-APPL-SN-47443			US-PATENT-APPL-SN-24154
		US-PATENT-CLASS-343-840			US-PATENT-CLASS-250-211J			US-PATENT-CLASS-188-1C
		US-PATENT-3,594,803			US-PATENT-3,603,798			US-PATENT-CLASS-188-129
N72-12408*	c 15	NASA-CASE-XLA-05966	N72-17153*	c 09	NASA-CASE-ARC-10105	N72-17451*	c 15	US-PATENT-3,603,433
		US-PATENT-APPL-SN-784544			US-PATENT-APPL-SN-887698			NASA-CASE-WLP-10002
		US-PATENT-CLASS-140-105			US-PATENT-CLASS-128-2.1A			US-PATENT-APPL-SN-47062
		US-PATENT-CLASS-72-307			US-PATENT-CLASS-307-252F			US-PATENT-CLASS-180-125
		US-PATENT-3,584,660			US-PATENT-CLASS-307-252J			US-PATENT-CLASS-180-127
N72-12409*	c 15	NASA-CASE-NPO-10637			US-PATENT-CLASS-325-492			US-PATENT-CLASS-308-DIG.1
		US-PATENT-APPL-SN-851298			US-PATENT-CLASS-340-177			US-PATENT-CLASS-308-5
		US-PATENT-CLASS-236-68	N72-17154*	c 09	US-PATENT-3,603,946			US-PATENT-CLASS-308-9
		US-PATENT-CLASS-337-354			NASA-CASE-ERC-10139	N72-17452*	c 15	US-PATENT-3,610,365
		US-PATENT-CLASS-337-359			US-PATENT-APPL-SN-889555			NASA-CASE-XLA-10322
		US-PATENT-CLASS-337-75			US-PATENT-CLASS-321-10			US-PATENT-APPL-SN-887699
		US-PATENT-CLASS-60-23			US-PATENT-CLASS-336-178			US-PATENT-CLASS-73-88.5R
		US-PATENT-3,591,960			US-PATENT-3,603,864			US-PATENT-3,608,365
N72-12440*	c 16	NASA-CASE-MFS-20180	N72-17155*	c 09	NASA-CASE-NPO-11023	N72-17453*	c 15	NASA-CASE-NPO-11177
		US-PATENT-APPL-SN-863276			US-PATENT-APPL-SN-865274			US-PATENT-APPL-SN-20960
		US-PATENT-CLASS-331-94.5			US-PATENT-CLASS-330-18			US-PATENT-CLASS-62-51
		US-PATENT-CLASS-350-1			US-PATENT-CLASS-330-40			US-PATENT-3,605,424
		US-PATENT-CLASS-350-312			US-PATENT-3,603,892	N72-17454*	c 15	NASA-CASE-NPO-11059
		US-PATENT-3,593,194	N72-17156*	c 09	NASA-CASE-NPO-10199			US-PATENT-APPL-SN-864020
N72-13437*	c 16	NASA-CASE-MFS-20125			US-PATENT-APPL-SN-739391			US-PATENT-CLASS-248-14
		US-PATENT-APPL-SN-830366			US-PATENT-CLASS-178-7.1			US-PATENT-3,606,979
		US-PATENT-CLASS-178-DIG.21			US-PATENT-CLASS-330-11	N72-17455*	c 15	NASA-CASE-NPO-11140
		US-PATENT-CLASS-178-6			US-PATENT-CLASS-330-35			US-PATENT-APPL-SN-15019
		US-PATENT-CLASS-250-203X			US-PATENT-3,609,230			US-PATENT-CLASS-174-84
		US-PATENT-CLASS-356-152	N72-17157*	c 09	NASA-CASE-NPO-11253			US-PATENT-CLASS-200-64
		US-PATENT-3,603,686			US-PATENT-APPL-SN-21906			US-PATENT-CLASS-339-176M
N72-15098*	c 05	NASA-CASE-MS-13917-1			US-PATENT-CLASS-307-223			US-PATENT-CLASS-339-278M
		US-PATENT-APPL-SN-198355			US-PATENT-CLASS-307-227			US-PATENT-CLASS-339-46
N72-15986*	c 03	NASA-CASE-XGS-10010			US-PATENT-CLASS-307-81			US-PATENT-CLASS-89-1.811
		US-PATENT-APPL-SN-729299			US-PATENT-CLASS-328-186			US-PATENT-3,611,274
		US-PATENT-CLASS-136-133	N72-17171*	c 10	US-PATENT-3,609,387	N72-17532*	c 18	NASA-CASE-MFS-13532
		US-PATENT-CLASS-136-135			NASA-CASE-XAC-05462-2			US-PATENT-APPL-SN-720546
		US-PATENT-CLASS-136-6			US-PATENT-APPL-SN-28235			US-PATENT-CLASS-106-292
		US-PATENT-3,607,401			US-PATENT-CLASS-307-295			US-PATENT-CLASS-106-299
N72-16015*	c 05	NASA-CASE-KSC-10278			US-PATENT-CLASS-328-167			US-PATENT-3,607,338
		US-PATENT-APPL-SN-856327			US-PATENT-CLASS-330-109	N72-17747*	c 23	NASA-CASE-ERC-10089
		US-PATENT-CLASS-324-66			US-PATENT-CLASS-330-176			US-PATENT-APPL-SN-791267
		US-PATENT-CLASS-340-279			US-PATENT-CLASS-333-70CR			US-PATENT-CLASS-340-174AG
		US-PATENT-CLASS-35-8			US-PATENT-3,609,567			US-PATENT-CLASS-340-174CT
		US-PATENT-3,609,740	N72-17172*	c 10	NASA-CASE-ARC-10020			US-PATENT-CLASS-340-174GA
N72-16172*	c 10	NASA-CASE-ARC-10269-1			US-PATENT-APPL-SN-31885			US-PATENT-CLASS-340-174SC
		US-PATENT-APPL-SN-56791			US-PATENT-CLASS-330-107			US-PATENT-3,611,330
		US-PATENT-CLASS-307-230			US-PATENT-CLASS-330-109	N72-17820*	c 26	NASA-CASE-XER-08476-1
		US-PATENT-CLASS-307-262			US-PATENT-CLASS-330-26			US-PATENT-APPL-SN-672388
		US-PATENT-CLASS-328-155			US-PATENT-CLASS-330-31			US-PATENT-CLASS-148-187
		US-PATENT-3,614,475			US-PATENT-CLASS-330-94			US-PATENT-CLASS-29-578
N72-16282*	c 14	NASA-CASE-LAR-10913			US-PATENT-3,605,032			US-PATENT-CLASS-29-589
		US-PATENT-APPL-SN-779160	N72-17173*	c 10	NASA-CASE-MFS-13130			US-PATENT-3,602,984
		US-PATENT-CLASS-73-12			US-PATENT-APPL-SN-7888	N72-17843*	c 28	NASA-CASE-NPO-10046
		US-PATENT-3,605,482			US-PATENT-CLASS-250-209			US-PATENT-APPL-SN-860635
N72-16283*	c 14	NASA-CASE-GSC-10780-1			US-PATENT-CLASS-250-83.UV			US-PATENT-CLASS-60-258
		US-PATENT-APPL-SN-860493			US-PATENT-CLASS-340-228.2			US-PATENT-CLASS-60-39.74
		US-PATENT-CLASS-82-24R			US-PATENT-3,609,364			US-PATENT-3,603,092
		US-PATENT-3,608,409	N72-17183*	c 11	NASA-CASE-MFS-20509	N72-17873*	c 30	NASA-CASE-ARC-10134
N72-16329*	c 15	NASA-CASE-XLA-07829			US-PATENT-APPL-SN-889557			US-PATENT-APPL-SN-819898
		US-PATENT-APPL-SN-763684			US-PATENT-CLASS-73-147			US-PATENT-CLASS-244-3.21
		US-PATENT-CLASS-264-DIG.44			US-PATENT-3,602,920			US-PATENT-3,603,532
		US-PATENT-CLASS-264-221	N72-17323*	c 14	NASA-CASE-ERC-10248	N72-17947*	c 33	NASA-CASE-MS-12143.1
		US-PATENT-CLASS-264-225			US-PATENT-APPL-SN-868445			US-PATENT-APPL-SN-791268
		US-PATENT-CLASS-264-227			US-PATENT-CLASS-350-162			US-PATENT-CLASS-102-105
		US-PATENT-3,608,046			US-PATENT-CLASS-356-113			US-PATENT-CLASS-161-67
N72-16330*	c 15	NASA-CASE-LAR-10203-1			US-PATENT-CLASS-356-209			US-PATENT-CLASS-244-117
		US-PATENT-APPL-SN-769592			US-PATENT-CLASS-356-244			US-PATENT-3,603,260
		US-PATENT-CLASS-156-84			US-PATENT-3,603,690	N72-17948*	c 33	NASA-CASE-NPO-10828
		US-PATENT-CLASS-156-86	N72-17324*	c 14	NASA-CASE-MFS-20596			US-PATENT-APPL-SN-873260
		US-PATENT-3,607,495			US-PATENT-APPL-SN-7867			US-PATENT-CLASS-165-105
N72-17093*	c 06	NASA-CASE-LEW-10794-1			US-PATENT-CLASS-350-3.5			US-PATENT-3,603,382
		US-PATENT-APPL-SN-33535			US-PATENT-3,605,519	N72-18184*	c 08	NASA-CASE-NPO-10629
		US-PATENT-CLASS-23-55			NASA-CASE-MS-15158-1			US-PATENT-APPL-SN-860751
		US-PATENT-CLASS-23-88	N72-17325*	c 14	US-PATENT-APPL-SN-889479			US-PATENT-CLASS-178-50
		US-PATENT-CLASS-23-97			US-PATENT-CLASS-324-52			US-PATENT-CLASS-178-66
		US-PATENT-3,607,015			US-PATENT-3,609,535			US-PATENT-CLASS-179-15
N72-17094*	c 06	NASA-CASE-NPO-10234	N72-17326*	c 14	NASA-CASE-XMS-01994-1			US-PATENT-CLASS-235-154
		US-PATENT-APPL-SN-800204			US-PATENT-APPL-SN-814212			US-PATENT-CLASS-340-347DD
		US-PATENT-CLASS-23-230R			US-PATENT-CLASS-356-4			US-PATENT-3,603,976
		US-PATENT-CLASS-23-232C			US-PATENT-3,603,683	N72-18411*	c 14	NASA-CASE-KSC-10294
		US-PATENT-CLASS-23-253PC			NASA-CASE-LEW-10281-1			US-PATENT-APPL-SN-889556
		US-PATENT-CLASS-73-23.1	N72-17327*	c 14	US-PATENT-APPL-SN-861649			US-PATENT-CLASS-307-31.11
		US-PATENT-3,607,076			US-PATENT-CLASS-73-198			US-PATENT-CLASS-346-107A
N72-17095*	c 06	NASA-CASE-NPO-10774			US-PATENT-3,605,495			US-PATENT-CLASS-346-23
		US-PATENT-APPL-SN-848805	N72-17328*	c 14	NASA-CASE-XLA-07813			US-PATENT-CLASS-352-84
		US-PATENT-CLASS-23-201			US-PATENT-APPL-SN-791364			US-PATENT-CLASS-95-1.1
		US-PATENT-CLASS-23-230			US-PATENT-CLASS-250-207			US-PATENT-3,603,974
		US-PATENT-CLASS-23-253			US-PATENT-CLASS-250-41.9	N72-18477*	c 15	NASA-CASE-GSC-10566-1
		US-PATENT-CLASS-73-76			US-PATENT-CLASS-250-49.5			US-PATENT-APPL-SN-889438
		US-PATENT-3,607,080			US-PATENT-CLASS-250-71.5			US-PATENT-CLASS-242-54
N72-17109*	c 07	NASA-CASE-MS-12146-1			US-PATENT-CLASS-250-83.3			US-PATENT-CLASS-52-108
		US-PATENT-APPL-SN-50206			US-PATENT-3,609,353			US-PATENT-3,608,844
		US-PATENT-CLASS-178-5.2R	N72-17329*	c 14	NASA-CASE-FRC-10012	N72-18766*	c 28	NASA-CASE-GSC-10640-1
		US-PATENT-CLASS-178-5.4			US-PATENT-APPL-SN-771216			US-PATENT-APPL-SN-17101
		US-PATENT-CLASS-178-6.7			US-PATENT-CLASS-73-194A			US-PATENT-CLASS-23-281
		US-PATENT-3,603,722			US-PATENT-3,611,801			US-PATENT-CLASS-23-288
N72-17152*	c 09	NASA-CASE-ARC-10178-1	N72-17450*	c 15	NASA-CASE-MS-12279			US-PATENT-CLASS-60-260

N72-18859* #	c 31	US-PATENT-3,603,093 NASA-CASE-MSC-13281 US-PATENT-APPL-SN-7669 US-PATENT-CLASS-244-15.5 US-PATENT-3,606,212	N72-20221* #	c 10	NASA-CASE-GSC-10082-1 US-PATENT-APPL-SN-41430 US-PATENT-CLASS-307-273 US-PATENT-CLASS-307-288 US-PATENT-CLASS-307-313 US-PATENT-CLASS-328-207 US-PATENT-CLASS-330-30D US-PATENT-3,633,048	N72-20767* #	c 28	US-PATENT-3,636,711 NASA-CASE-ARC-10180-1 US-PATENT-APPL-SN-136253
N72-20031* #	c 03	NASA-CASE-GSC-10669-1 US-PATENT-APPL-SN-90595 US-PATENT-CLASS-136-89 US-PATENT-CLASS-244-15S US-PATENT-CLASS-340-210 US-PATENT-3,636,539	N72-20222* #	c 10	NASA-CASE-XLA-11189 US-PATENT-APPL-SN-889375 US-PATENT-CLASS-324-115 US-PATENT-CLASS-324-132 US-PATENT-3,638,114	N72-20840* #	c 31	NASA-CASE-MFS-20922 US-PATENT-APPL-SN-220274
N72-20032* #	c 03	NASA-CASE-NPO-11021 US-PATENT-APPL-SN-880250 US-PATENT-CLASS-136-166 US-PATENT-CLASS-136-79 US-PATENT-CLASS-136-81 US-PATENT-3,625,766	N72-20223* #	c 10	NASA-CASE-NPO-11133 US-PATENT-APPL-SN-887885 US-PATENT-CLASS-307-295 US-PATENT-CLASS-328-16 US-PATENT-CLASS-328-166 US-PATENT-CLASS-328-20 US-PATENT-CLASS-328-38 US-PATENT-3,626,308	N72-20915* #	c 33	NASA-CASE-NPO-10831 US-PATENT-APPL-SN-10161 US-PATENT-CLASS-122-32 US-PATENT-CLASS-165-133 US-PATENT-CLASS-165-155 US-PATENT-CLASS-165-158 US-PATENT-CLASS-165-161 US-PATENT-CLASS-165-174
N72-20033* #	c 03	NASA-CASE-NPO-10401 US-PATENT-APPL-SN-15025 US-PATENT-CLASS-210-212 US-PATENT-CLASS-356-222 US-PATENT-3,630,827	N72-20224* #	c 10	NASA-CASE-NPO-11203 US-PATENT-APPL-SN-3696 US-PATENT-CLASS-324-83A US-PATENT-CLASS-324-85 US-PATENT-CLASS-328-133 US-PATENT-CLASS-343-12 US-PATENT-3,631,381	N72-21094* #	c 06	NASA-CASE-ERC-10108 US-PATENT-APPL-SN-833049 US-PATENT-CLASS-156-3 US-PATENT-CLASS-96-36.2 US-PATENT-3,615,465
N72-20034* #	c 03	NASA-CASE-LEW-11359-2 US-PATENT-APPL-SN-57399 US-PATENT-CLASS-136-100R US-PATENT-CLASS-136-175 US-PATENT-CLASS-136-83R US-PATENT-3,635,765	N72-20225* #	c 10	NASA-CASE-MSC-13407-1 US-PATENT-APPL-SN-65840 US-PATENT-CLASS-315-22 US-PATENT-CLASS-315-25 US-PATENT-3,638,066	N72-21105* #	c 06	NASA-CASE-GSC-11304-1 US-PATENT-APPL-SN-137912
N72-20096* #	c 05	NASA-CASE-MSC-12411-1 US-PATENT-APPL-SN-701244 US-PATENT-CLASS-128-142.5 US-PATENT-CLASS-128-402 US-PATENT-CLASS-2-2.1 US-PATENT-3,635,216	N72-20226* #	c 11	NASA-CASE-NPO-11210 US-PATENT-APPL-SN-880831 US-PATENT-CLASS-123-102 US-PATENT-CLASS-180-105E US-PATENT-CLASS-318-308 US-PATENT-CLASS-318-327 US-PATENT-CLASS-318-376 US-PATENT-3,630,304	N72-21117* #	c 07	NASA-CASE-XLA-11154 US-PATENT-APPL-SN-23532 US-PATENT-CLASS-343-706 US-PATENT-CLASS-343-912 US-PATENT-3,623,107
N72-20097* #	c 05	NASA-CASE-MFS-20332 US-PATENT-APPL-SN-869260 US-PATENT-CLASS-137-469 US-PATENT-CLASS-137-81 US-PATENT-3,636,966	N72-20237* #	c 14	NASA-CASE-GSC-10514-1 US-PATENT-APPL-SN-873045 US-PATENT-CLASS-250-208 US-PATENT-CLASS-356-138 US-PATENT-CLASS-356-152 US-PATENT-3,637,312	N72-21118* #	c 07	NASA-CASE-NPO-11001 US-PATENT-APPL-SN-856279 US-PATENT-CLASS-343-100ST US-PATENT-CLASS-343-5CM US-PATENT-CLASS-343-6.5R US-PATENT-3,624,650
N72-20098* #	c 05	NASA-CASE-MSC-12398 US-PATENT-APPL-SN-785615 US-PATENT-CLASS-2-2.1 US-PATENT-3,624,839	N72-20238* #	c 14	NASA-CASE-LAR-10176-1 US-PATENT-APPL-SN-811038 US-PATENT-CLASS-95-18 US-PATENT-3,628,828	N72-21119* #	c 07	NASA-CASE-ERC-10112 US-PATENT-APPL-SN-796690 US-PATENT-CLASS-179-100.2K US-PATENT-3,614,343
N72-20121* #	c 06	NASA-CASE-NPO-10765 US-PATENT-APPL-SN-770425 US-PATENT-CLASS-260-544F US-PATENT-3,637,842	N72-20239* #	c 14	NASA-CASE-GSC-10503-1 US-PATENT-APPL-SN-789044 US-PATENT-CLASS-250-83.6R US-PATENT-3,626,189	N72-21197* #	c 08	NASA-CASE-KSC-10326 US-PATENT-APPL-SN-25487 US-PATENT-CLASS-235-155 US-PATENT-CLASS-340-347DD US-PATENT-3,638,002
N72-20140* #	c 07	NASA-CASE-NPO-10844 US-PATENT-APPL-SN-839834 US-PATENT-CLASS-178-69.5R US-PATENT-CLASS-179-155S US-PATENT-CLASS-325-321 US-PATENT-CLASS-325-38 US-PATENT-CLASS-325-4 US-PATENT-CLASS-325-58 US-PATENT-3,626,298	N72-20442* #	c 15	NASA-CASE-GSC-10607-1 US-PATENT-APPL-SN-27340 US-PATENT-CLASS-251-129 US-PATENT-CLASS-251-333 US-PATENT-3,632,081	N72-21198* #	c 08	NASA-CASE-ERC-10307 US-PATENT-APPL-SN-39755 US-PATENT-CLASS-307-299 US-PATENT-CLASS-307-303 US-PATENT-CLASS-307-311 US-PATENT-CLASS-340-173.2 US-PATENT-CLASS-340-173LS US-PATENT-3,623,030
N72-20141* #	c 07	NASA-CASE-ERC-10179 US-PATENT-APPL-SN-50207 US-PATENT-CLASS-325-445 US-PATENT-CLASS-329-161 US-PATENT-CLASS-329-162 US-PATENT-CLASS-332-51W US-PATENT-CLASS-333-73W US-PATENT-CLASS-343-772 US-PATENT-CLASS-343-773 US-PATENT-CLASS-343-786 US-PATENT-3,633,110	N72-20443* #	c 15	NASA-CASE-NPO-10671 US-PATENT-APPL-SN-857967 US-PATENT-CLASS-188-1B US-PATENT-CLASS-188-1C US-PATENT-CLASS-188-268 US-PATENT-3,637,051	N72-21199* #	c 08	NASA-CASE-NPO-10743 US-PATENT-APPL-SN-850587 US-PATENT-CLASS-340-174CS US-PATENT-CLASS-340-174LC US-PATENT-CLASS-340-174M US-PATENT-CLASS-340-174SR US-PATENT-3,613,110
N72-20154* #	c 07	NASA-CASE-NPO-11243 US-PATENT-APPL-SN-17753 US-PATENT-CLASS-235-92CC US-PATENT-CLASS-235-92DE US-PATENT-CLASS-235-92DM US-PATENT-CLASS-235-92LG US-PATENT-CLASS-235-92R US-PATENT-CLASS-340-347DA US-PATENT-CLASS-340-347DD US-PATENT-3,632,996	N72-20444* #	c 15	NASA-CASE-FRC-10038 US-PATENT-APPL-SN-889554 US-PATENT-CLASS-29-412 US-PATENT-CLASS-29-426 US-PATENT-CLASS-29-527.2 US-PATENT-CLASS-29-624 US-PATENT-CLASS-51-216 US-PATENT-CLASS-51-320 US-PATENT-CLASS-51-323 US-PATENT-3,638,823	N72-21200* #	c 08	NASA-CASE-NPO-11018 US-PATENT-APPL-SN-873259 US-PATENT-CLASS-340-347AD US-PATENT-3,613,111
N72-20176* #	c 08	NASA-CASE-NPO-11130 US-PATENT-APPL-SN-21508 US-PATENT-CLASS-235-152 US-PATENT-CLASS-235-92CC US-PATENT-CLASS-235-92DE US-PATENT-CLASS-235-92DM US-PATENT-CLASS-235-92LG US-PATENT-CLASS-235-92R US-PATENT-CLASS-340-347DA US-PATENT-CLASS-340-347DD US-PATENT-3,632,996	N72-20445* #	c 15	NASA-CASE-NPO-10704 US-PATENT-APPL-SN-59895 US-PATENT-CLASS-138-178 US-PATENT-CLASS-285-18 US-PATENT-CLASS-285-345 US-PATENT-3,632,140	N72-21243* #	c 09	NASA-CASE-LEW-11005-1 US-PATENT-APPL-SN-86548 US-PATENT-CLASS-323-DIG.1 US-PATENT-CLASS-323-227 US-PATENT-CLASS-323-38 US-PATENT-3,638,103
N72-20177* #	c 08	NASA-CASE-NPO-10748 US-PATENT-APPL-SN-63383 US-PATENT-CLASS-324-77G US-PATENT-3,631,339	N72-20446* #	c 15	NASA-CASE-MFS-20698 US-PATENT-APPL-SN-3418 US-PATENT-CLASS-100-299 US-PATENT-CLASS-23-209.1 US-PATENT-CLASS-264-22 US-PATENT-CLASS-425-77 US-PATENT-3,632,242	N72-21244* #	c 09	NASA-CASE-LAR-10545-1 US-PATENT-APPL-SN-31703 US-PATENT-CLASS-343-771 US-PATENT-CLASS-343-893 US-PATENT-3,638,224
N72-20199* #	c 09	NASA-CASE-NPO-10722 US-PATENT-APPL-SN-860492 US-PATENT-CLASS-200-81.9M US-PATENT-CLASS-335-205 US-PATENT-3,632,923	N72-20597* #	c 22	NASA-CASE-XLE-04599 US-PATENT-APPL-SN-751215 US-PATENT-CLASS-176-86G US-PATENT-3,629,068	N72-21245* #	c 09	NASA-CASE-ARC-10192 US-PATENT-APPL-SN-15024 US-PATENT-CLASS-307-230 US-PATENT-CLASS-307-295 US-PATENT-CLASS-328-142 US-PATENT-CLASS-328-167 US-PATENT-CLASS-330-70R US-PATENT-CLASS-330-80 US-PATENT-CLASS-333-80 US-PATENT-3,621,407
N72-20200* #	c 09	NASA-CASE-NPO-10694 US-PATENT-APPL-SN-24224 US-PATENT-CLASS-339-275T US-PATENT-CLASS-339-276T US-PATENT-3,631,382	N72-20758* #	c 28	NASA-CASE-XNP-03282 US-PATENT-APPL-SN-745337 US-PATENT-CLASS-60-254	N72-21246* #	c 09	NASA-CASE-NPO-11134 US-PATENT-APPL-SN-883524 US-PATENT-CLASS-318-576 US-PATENT-CLASS-324-71R US-PATENT-CLASS-346-1 US-PATENT-CLASS-346-29 US-PATENT-3,624,659
N72-20206* #	c 09	NASA-CASE-ERC-10468 US-PATENT-APPL-SN-144958				N72-21247* #	c 09	NASA-CASE-KSC-10393 US-PATENT-APPL-SN-71047 US-PATENT-CLASS-307-257 US-PATENT-CLASS-307-259 US-PATENT-CLASS-331-111 US-PATENT-CLASS-331-14 US-PATENT-CLASS-331-23 US-PATENT-CLASS-331-30



		US-PATENT-3,614,648			US-PATENT-CLASS-343-771			US-PATENT-APPL-SN-865106
N72-21248* #	c 09	NASA-CASE-LAR-10503-1			US-PATENT-CLASS-343-797			US-PATENT-CLASS-128-2.1A
		US-PATENT-APPL-SN-229143			US-PATENT-CLASS-343-853			US-PATENT-CLASS-128-2R
N72-21310* #	c 12	NASA-CASE-MFS-20829			US-PATENT-CLASS-343-912			US-PATENT-CLASS-307-231
		US-PATENT-APPL-SN-61894			US-PATENT-3,623,114			US-PATENT-CLASS-307-247
		US-PATENT-CLASS-169-28	N72-22162* #	c 08	NASA-CASE-NPO-11333			US-PATENT-CLASS-307-288
		US-PATENT-CLASS-169-36			US-PATENT-APPL-SN-78065			US-PATENT-CLASS-325-29
		US-PATENT-3,613,794			US-PATENT-CLASS-178-52			US-PATENT-CLASS-325-492
N72-21405* #	c 14	NASA-CASE-NPO-10832			US-PATENT-CLASS-179-15A			US-PATENT-CLASS-340-171
		US-PATENT-APPL-SN-22265			US-PATENT-CLASS-179-15BL			US-PATENT-CLASS-340-203
		US-PATENT-CLASS-73-141A			US-PATENT-CLASS-307-243			US-PATENT-3,621,290
		US-PATENT-3,623,360			US-PATENT-CLASS-307-251	N72-22203* #	c 09	NASA-CASE-XER-11046
N72-21407* #	c 14	NASA-CASE-MFS-20642			US-PATENT-CLASS-328-104			US-PATENT-APPL-SN-810579
		US-PATENT-APPL-SN-873793			US-PATENT-CLASS-328-15			US-PATENT-CLASS-321-15
		US-PATENT-CLASS-73-147			US-PATENT-3,614,327			US-PATENT-CLASS-321-18
		US-PATENT-3,623,361	N72-22163* #	c 08	NASA-CASE-MSC-13110-1			US-PATENT-CLASS-321-2
N72-21408* #	c 14	NASA-CASE-MSC-13332-1			US-PATENT-APPL-SN-23132			US-PATENT-CLASS-321-45
		US-PATENT-APPL-SN-77169			US-PATENT-CLASS-340-347AD			US-PATENT-CLASS-331-117
		US-PATENT-CLASS-250-43.5R			US-PATENT-3,614,772			US-PATENT-3,621,362
		US-PATENT-CLASS-250-83.3H	N72-22164* #	c 08	NASA-CASE-NPO-10745	N72-22204* #	c 09	NASA-CASE-LAR-10137-1
		US-PATENT-3,614,431			US-PATENT-APPL-SN-878730			US-PATENT-APPL-SN-881041
N72-21409* #	c 14	NASA-CASE-MSC-12105-1			US-PATENT-CLASS-178-DIG.28			US-PATENT-CLASS-200-81R
		US-PATENT-APPL-SN-763743			US-PATENT-CLASS-178-DIG.36			US-PATENT-CLASS-200-82C
		US-PATENT-CLASS-356-17			US-PATENT-CLASS-178-6.8			US-PATENT-3,609,271
		US-PATENT-CLASS-356-18			US-PATENT-CLASS-178-7.2R	N72-22235* #	c 10	NASA-CASE-GSC-10064-1
		US-PATENT-3,614,228			US-PATENT-3,621,130			US-PATENT-APPL-SN-802812
N72-21462* #	c 15	NASA-CASE-NPO-10679	N72-22165* #	c 08	NASA-CASE-NPO-11104			US-PATENT-CLASS-343-16M
		US-PATENT-APPL-SN-848282			US-PATENT-APPL-SN-860750			US-PATENT-CLASS-343-7.4
		US-PATENT-CLASS-74-89.15			US-PATENT-CLASS-235-150.52			US-PATENT-CLASS-343-779
		US-PATENT-3,614,898			US-PATENT-CLASS-235-150.53			US-PATENT-CLASS-343-786
N72-21463* #	c 15	NASA-CASE-MFS-20413			US-PATENT-CLASS-235-183			US-PATENT-3,623,094
		US-PATENT-APPL-SN-69209			US-PATENT-CLASS-235-194	N72-22236* #	c 10	NASA-CASE-GSC-10878-1
		US-PATENT-CLASS-74-469			US-PATENT-CLASS-235-197			US-PATENT-APPL-SN-889423
		US-PATENT-3,620,095			US-PATENT-CLASS-340-347R			US-PATENT-CLASS-307-206
N72-21464* #	c 15	NASA-CASE-ARC-10176-1	N72-22166* #	c 08	US-PATENT-3,621,228			US-PATENT-CLASS-307-215
		US-PATENT-APPL-SN-889583			NASA-CASE-NPO-10560			US-PATENT-CLASS-307-322
		US-PATENT-CLASS-324-57R			US-PATENT-APPL-SN-856282			US-PATENT-CLASS-307-323
		US-PATENT-CLASS-324-64			US-PATENT-CLASS-235-153			US-PATENT-3,621,277
		US-PATENT-CLASS-324-71R			US-PATENT-CLASS-324-73AT	N72-22245* #	c 11	NASA-CASE-NPO-12109
		US-PATENT-3,624,496			US-PATENT-CLASS-340-347AD			US-PATENT-APPL-SN-690172
N72-21465* #	c 15	NASA-CASE-GSC-10218-1	N72-22167* #	c 08	US-PATENT-3,603,772			US-PATENT-CLASS-230-221
		US-PATENT-APPL-SN-15022			NASA-CASE-NPO-11082			US-PATENT-CLASS-230-54
		US-PATENT-CLASS-141-23			US-PATENT-APPL-SN-868529			US-PATENT-3,612,391
		US-PATENT-CLASS-195-127			US-PATENT-CLASS-235-152	N72-22246* #	c 11	NASA-CASE-XLA-07430
		US-PATENT-CLASS-222-135			US-PATENT-CLASS-340-146.1			US-PATENT-APPL-SN-867841
		US-PATENT-CLASS-222-309			US-PATENT-CLASS-340-348			US-PATENT-CLASS-73-147
		US-PATENT-CLASS-222-71			US-PATENT-3,609,327			US-PATENT-3,620,076
		US-PATENT-CLASS-23-253R	N72-22195* #	c 09	NASA-CASE-MFS-14710	N72-22247* #	c 11	NASA-CASE-NPO-11013
		US-PATENT-CLASS-23-259			US-PATENT-APPL-SN-852843			US-PATENT-APPL-SN-858695
		US-PATENT-CLASS-73-425.6			US-PATENT-CLASS-74-105			US-PATENT-CLASS-42-1F
		US-PATENT-3,615,241			US-PATENT-3,614,899			US-PATENT-3,619,924
N72-21466* #	c 15	NASA-CASE-NPO-10440	N72-22196* #	c 09	NASA-CASE-ERC-10075-2	N72-22437* #	c 14	NASA-CASE-LAR-10496-1
		US-PATENT-APPL-SN-756834			US-PATENT-APPL-SN-775870			US-PATENT-APPL-SN-12661
		US-PATENT-CLASS-204-130			US-PATENT-CLASS-321-14			US-PATENT-CLASS-73-141A
		US-PATENT-CLASS-204-59			US-PATENT-CLASS-321-19			US-PATENT-3,611,798
		US-PATENT-3,616,338			US-PATENT-CLASS-321-2	N72-22438* #	c 14	NASA-CASE-ARC-10263-1
N72-21489* #	c 15	NASA-CASE-XLA-10470			US-PATENT-CLASS-321-25			US-PATENT-APPL-SN-882122
		US-PATENT-APPL-SN-219436			US-PATENT-CLASS-323-56			US-PATENT-CLASS-73-398C
N72-21624* #	c 21	NASA-CASE-HQN-10439			US-PATENT-CLASS-323-89C			US-PATENT-3,620,083
		US-PATENT-APPL-SN-889551			US-PATENT-3,614,587	N72-22439* #	c 14	NASA-CASE-MFS-20890
		US-PATENT-CLASS-244-1SA	N72-22197* #	c 09	NASA-CASE-LEW-10433-1			US-PATENT-APPL-SN-103229
		US-PATENT-3,637,170			US-PATENT-APPL-SN-849106			US-PATENT-CLASS-264-22
N72-21701* #	c 26	NASA-CASE-ERC-10119			US-PATENT-CLASS-307-262			US-PATENT-CLASS-29-421
		US-PATENT-APPL-SN-825258			US-PATENT-CLASS-307-88MP			US-PATENT-CLASS-310-11
		US-PATENT-CLASS-307-299			US-PATENT-3,612,895			US-PATENT-CLASS-310-42
		US-PATENT-CLASS-317-234V	N72-22198* #	c 09	NASA-CASE-MFS-13687-2	N72-22440* #	c 14	NASA-CASE-ARC-10154-1
		US-PATENT-CLASS-317-235R			US-PATENT-APPL-SN-80369			US-PATENT-APPL-SN-793771
		US-PATENT-CLASS-331-107			US-PATENT-CLASS-174-106R			US-PATENT-CLASS-73-67.2
		US-PATENT-CLASS-332-31			US-PATENT-CLASS-174-117FF			US-PATENT-3,620,069
		US-PATENT-3,614,557			US-PATENT-CLASS-174-36	N72-22441* #	c 14	NASA-CASE-NPO-11002
N72-21893* #	c 31	NASA-CASE-KSC-10622-1	N72-22199* #	c 09	US-PATENT-3,612,743			US-PATENT-APPL-SN-856328
		US-PATENT-APPL-SN-149983			NASA-CASE-ERC-10222			US-PATENT-CLASS-350-19
N72-22041* #	c 03	NASA-CASE-NPO-10591			US-PATENT-APPL-SN-832603			US-PATENT-CLASS-350-23
		US-PATENT-APPL-SN-776185			US-PATENT-CLASS-29-590			US-PATENT-CLASS-350-26
		US-PATENT-CLASS-29-572	N72-22200* #	c 09	US-PATENT-3,621,565			US-PATENT-CLASS-350-35
		US-PATENT-3,616,528			NASA-CASE-FRC-10036			US-PATENT-CLASS-350-36
N72-22042* #	c 03	NASA-CASE-NPO-10747			US-PATENT-APPL-SN-872602			US-PATENT-CLASS-350-49
		US-PATENT-APPL-SN-6616			US-PATENT-CLASS-307-237			US-PATENT-CLASS-350-52
		US-PATENT-CLASS-136-89			US-PATENT-CLASS-307-254			US-PATENT-3,612,645
		US-PATENT-3,615,853			US-PATENT-CLASS-307-317	N72-22442* #	c 14	NASA-CASE-MFS-21629
N72-22092* #	c 05	NASA-CASE-ARC-10275-1			US-PATENT-CLASS-328-1			US-PATENT-APPL-SN-612265
		US-PATENT-APPL-SN-21644			US-PATENT-CLASS-328-151			US-PATENT-CLASS-324-61
		US-PATENT-CLASS-2-2.1A			US-PATENT-CLASS-73-88.5			US-PATENT-CLASS-73-304
		US-PATENT-3,636,564			US-PATENT-3,621,285			US-PATENT-3,639,835
N72-22093* #	c 05	NASA-CASE-MSC-12324-1	N72-22201* #	c 09	NASA-CASE-LEW-10387	N72-22443* #	c 14	NASA-CASE-XGS-03736
		US-PATENT-APPL-SN-63384			US-PATENT-APPL-SN-76899			US-PATENT-APPL-SN-749320
		US-PATENT-CLASS-128-295			US-PATENT-CLASS-307-223B			US-PATENT-CLASS-252-300
		US-PATENT-CLASS-4-110			US-PATENT-CLASS-307-241			US-PATENT-CLASS-96-90PC
		US-PATENT-CLASS-4-99			US-PATENT-CLASS-307-252J			US-PATENT-3,639,250
		US-PATENT-3,602,923			US-PATENT-CLASS-307-252K	N72-22444* #	c 14	NASA-CASE-LAR-10523-1
N72-22107* #	c 06	NASA-CASE-NPO-10862			US-PATENT-CLASS-307-284			US-PATENT-APPL-SN-32665
		US-PATENT-APPL-SN-810815			US-PATENT-CLASS-307-304			US-PATENT-CLASS-250-203
		US-PATENT-CLASS-260-877			US-PATENT-CLASS-307-317			US-PATENT-CLASS-350-16
		US-PATENT-3,639,510			US-PATENT-CLASS-328-106			US-PATENT-CLASS-350-52
N72-22127* #	c 07	NASA-CASE-NPO-10303	N72-22202* #	c 09	US-PATENT-3,621,287			US-PATENT-CLASS-356-248
		US-PATENT-APPL-SN-848776			NASA-CASE-ARC-10136-1			

N72-22445* #	c 14	US-PATENT-3,647,276 NASA-CASE-LAR-10184 US-PATENT-APPL-SN-16808 US-PATENT-CLASS-33-1745 US-PATENT-CLASS-350-86 US-PATENT-3,620,595	N72-22771* #	c 28	US-PATENT-CLASS-60-202 US-PATENT-3,613,370 NASA-CASE-LEW-10835-1 US-PATENT-APPL-SN-67815 US-PATENT-CLASS-60-202 US-PATENT-3,620,018	N72-24753* #	c 25	US-PATENT-CLASS-264-92 US-PATENT-3,658,974 NASA-CASE-XNP-04167-2 US-PATENT-APPL-SN-866442 US-PATENT-CLASS-313-186 US-PATENT-CLASS-313-212 US-PATENT-CLASS-313-224 US-PATENT-CLASS-313-231 US-PATENT-CLASS-315-111 US-PATENT-CLASS-315-326 US-PATENT-CLASS-315-358 US-PATENT-CLASS-331-94.5 US-PATENT-3,617,804
N72-22482* #	c 15	NASA-CASE-XLA-04897 US-PATENT-APPL-SN-880249 US-PATENT-CLASS-73-133 US-PATENT-3,613,457	N72-22772* #	c 28	NASA-CASE-NPO-12072 US-PATENT-APPL-SN-82647 US-PATENT-CLASS-123-122AB US-PATENT-CLASS-137-81.5 US-PATENT-CLASS-261-145 US-PATENT-3,640,256	N72-25019* #	c 03	NASA-CASE-NPO-10575 US-PATENT-APPL-SN-6615 US-PATENT-CLASS-156-250 US-PATENT-CLASS-156-510 US-PATENT-3,654,036
N72-22483* #	c 15	NASA-CASE-XNP-09770-2 US-PATENT-APPL-SN-864039 US-PATENT-CLASS-209-349 US-PATENT-3,615,021	N72-22874* #	c 31	NASA-CASE-NPO-10683 US-PATENT-APPL-SN-26573 US-PATENT-CLASS-136-89 US-PATENT-CLASS-312-257 US-PATENT-3,620,846	N72-25020* #	c 03	NASA-CASE-GSC-11211-1 US-PATENT-APPL-SN-139528 US-PATENT-CLASS-235-92T US-PATENT-CLASS-307-141.8 US-PATENT-CLASS-320-48 US-PATENT-CLASS-324-29.5 US-PATENT-3,663,938
N72-22484* #	c 15	NASA-CASE-LAR-10031 US-PATENT-APPL-SN-867851 US-PATENT-CLASS-62-55.5 US-PATENT-3,625,018	N72-23048* #	c 03	NASA-CASE-NPO-11388 US-PATENT-APPL-SN-119282 US-PATENT-CLASS-310-2 US-PATENT-CLASS-321-2 US-PATENT-CLASS-322-2 US-PATENT-3,648,152	N72-25021* #	c 03	NASA-CASE-NPO-11118 US-PATENT-APPL-SN-8650 US-PATENT-CLASS-214-90R US-PATENT-3,666,120
N72-22485* #	c 15	NASA-CASE-MS-13512-1 US-PATENT-APPL-SN-73932 US-PATENT-CLASS-74-501R US-PATENT-3,625,084	N72-23085* #	c 05	NASA-CASE-LAR-10102-1 US-PATENT-APPL-SN-13266 US-PATENT-CLASS-224-25A US-PATENT-3,649,921	N72-25119* #	c 05	NASA-CASE-MS-12397-1 US-PATENT-APPL-SN-785613 US-PATENT-CLASS-2-115 US-PATENT-CLASS-2-2.1 US-PATENT-3,660,851
N72-22486* #	c 15	NASA-CASE-KSC-10031 US-PATENT-APPL-SN-98773 US-PATENT-CLASS-220-5R US-PATENT-CLASS-317-101DH US-PATENT-CLASS-317-117 US-PATENT-CLASS-317-120 US-PATENT-3,639,809	N72-23171* #	c 09	NASA-CASE-GSC-10221-1 US-PATENT-APPL-SN-779025 US-PATENT-CLASS-307-252N US-PATENT-CLASS-307-252R US-PATENT-CLASS-307-259 US-PATENT-CLASS-307-305 US-PATENT-3,621,294	N72-25120* #	c 05	NASA-CASE-MS-90153-2 US-PATENT-APPL-SN-844225 US-PATENT-CLASS-106-209 US-PATENT-CLASS-128-2.1 US-PATENT-CLASS-128-417 US-PATENT-CLASS-252-514 US-PATENT-CLASS-264-104 US-PATENT-3,665,064
N72-22487* #	c 15	NASA-CASE-GSC-10303 US-PATENT-APPL-SN-802813 US-PATENT-CLASS-29-473.1 US-PATENT-3,619,896	N72-23172* #	c 09	NASA-CASE-LAR-10320-1 US-PATENT-APPL-SN-18427 US-PATENT-CLASS-324-20R US-PATENT-3,649,907	N72-25121* #	c 05	NASA-CASE-FRC-10029-2 US-PATENT-APPL-SN-78704 US-PATENT-CLASS-156-264 US-PATENT-CLASS-156-308 US-PATENT-CLASS-29-25.14 US-PATENT-CLASS-29-25.18 US-PATENT-CLASS-29-482 US-PATENT-CLASS-29-630A US-PATENT-3,662,441
N72-22488* #	c 15	NASA-CASE-MS-11849-1 US-PATENT-APPL-SN-8617 US-PATENT-CLASS-85-1 US-PATENT-3,623,394	N72-23173* #	c 09	NASA-CASE-ERC-10267 US-PATENT-APPL-SN-41348 US-PATENT-CLASS-235-197 US-PATENT-CLASS-307-229 US-PATENT-CLASS-328-145 US-PATENT-3,648,043	N72-25122* #	c 05	NASA-CASE-MS-13609-1 US-PATENT-APPL-SN-94347 US-PATENT-CLASS-128-2N US-PATENT-3,662,744
N72-22489* #	c 15	NASA-CASE-GSC-10518-1 US-PATENT-APPL-SN-789045 US-PATENT-CLASS-417-152 US-PATENT-CLASS-55-446 US-PATENT-CLASS-55-464 US-PATENT-3,623,828	N72-23215* #	c 11	NASA-CASE-MFS-20710 US-PATENT-APPL-SN-114848 US-PATENT-CLASS-13-20 US-PATENT-CLASS-13-31 US-PATENT-3,647,924	N72-25146* #	c 06	NASA-CASE-NPO-11322 US-PATENT-APPL-SN-87550 US-PATENT-CLASS-250-43.5R US-PATENT-CLASS-73-23.1 US-PATENT-3,666,942
N72-22490* #	c 15	NASA-CASE-LEW-10856-1 US-PATENT-APPL-SN-3417 US-PATENT-CLASS-308-195 US-PATENT-3,620,585	N72-23457* #	c 14	NASA-CASE-MS-12267 US-PATENT-APPL-SN-792623 US-PATENT-CLASS-55-493 US-PATENT-CLASS-55-498 US-PATENT-CLASS-55-502 US-PATENT-CLASS-55-521 US-PATENT-3,650,095	N72-25147* #	c 06	NASA-CASE-ARC-10325 US-PATENT-APPL-SN-63610 US-PATENT-CLASS-260-2.5FP US-PATENT-3,663,464
N72-22491* #	c 15	NASA-CASE-GSC-10913 US-PATENT-APPL-SN-889558 US-PATENT-CLASS-219-158 US-PATENT-CLASS-219-234 US-PATENT-CLASS-219-85 US-PATENT-CLASS-228-57 US-PATENT-CLASS-29-628 US-PATENT-3,621,194	N72-23497* #	c 15	NASA-CASE-KSC-10242 US-PATENT-APPL-SN-73834 US-PATENT-CLASS-219-109 US-PATENT-CLASS-219-234 US-PATENT-CLASS-219-85 US-PATENT-CLASS-324-65R US-PATENT-3,621,193	N72-25148* #	c 06	NASA-CASE-MFS-13994-2 US-PATENT-APPL-SN-870689 US-PATENT-CLASS-260-348SC US-PATENT-3,660,434
N72-22492* #	c 15	NASA-CASE-MFS-20482 US-PATENT-APPL-SN-6610 US-PATENT-CLASS-29-472.9 US-PATENT-CLASS-29-473.1 US-PATENT-3,602,979	N72-23581* #	c 18	NASA-CASE-GSC-10361-1 US-PATENT-APPL-SN-700040 US-PATENT-CLASS-106-84 US-PATENT-3,620,784	N72-25149* #	c 06	NASA-CASE-GSC-10585-1 US-PATENT-APPL-SN-822039 US-PATENT-CLASS-195-103.5R US-PATENT-CLASS-195-28N US-PATENT-CLASS-260-211.5 US-PATENT-3,660,240
N72-22520* #	c 16	NASA-CASE-LAR-10815-1 US-PATENT-APPL-SN-233587	N72-23695* #	c 23	NASA-CASE-HQN-10541-3 US-PATENT-APPL-SN-822089 US-PATENT-CLASS-350-171 US-PATENT-3,606,522	N72-25150* #	c 06	NASA-CASE-XLE-06774-2 US-PATENT-APPL-SN-5114 US-PATENT-CLASS-117-132 US-PATENT-CLASS-117-161 US-PATENT-CLASS-260-92.1 US-PATENT-CLASS-260-92.1 US-PATENT-3,666,741
N72-22530* #	c 17	NASA-CASE-XLE-06461 US-PATENT-APPL-SN-853855 US-PATENT-CLASS-75-5B US-PATENT-3,623,861	N72-23809* #	c 28	NASA-CASE-XNP-09461 US-PATENT-APPL-SN-670829 US-PATENT-CLASS-239-418 US-PATENT-CLASS-239-433 US-PATENT-CLASS-239-543 US-PATENT-3,650,474	N72-25151* #	c 06	NASA-CASE-MFS-20979 US-PATENT-APPL-SN-100774 US-PATENT-CLASS-260-18S US-PATENT-CLASS-260-448.2D US-PATENT-CLASS-260-46.5E US-PATENT-CLASS-260-46.5G US-PATENT-CLASS-260-46.5P US-PATENT-3,666,718
N72-22535* #	c 17	NASA-CASE-LEW-10874-1 US-PATENT-APPL-SN-68024 US-PATENT-CLASS-148-32.5 US-PATENT-CLASS-75-170 US-PATENT-3,620,718	N72-23810* #	c 28	NASA-CASE-NPO-11458 US-PATENT-APPL-SN-36926 US-PATENT-CLASS-60-266 US-PATENT-CLASS-60-271 US-PATENT-3,648,461	N72-25152* #	c 06	NASA-CASE-NPO-10863-2 US-PATENT-APPL-SN-145026 US-PATENT-CLASS-260-92.1 US-PATENT-3,663,521
N72-22566* #	c 18	NASA-CASE-MFS-20011 US-PATENT-APPL-SN-813338 US-PATENT-CLASS-106-286 US-PATENT-CLASS-106-288B US-PATENT-CLASS-106-84 US-PATENT-3,620,791	N72-24037* #	c 03	NASA-CASE-GSC-11514-1 US-PATENT-APPL-SN-820453 US-PATENT-CLASS-117-201 US-PATENT-CLASS-136-89 US-PATENT-3,653,970	N72-25170* #	c 07	NASA-CASE-LAR-10513-1 US-PATENT-APPL-SN-64723 US-PATENT-CLASS-333-7
N72-22567* #	c 18	NASA-CASE-NPO-11091 US-PATENT-APPL-SN-860781 US-PATENT-CLASS-260-2.1E US-PATENT-3,629,161	N72-24477* #	c 14	NASA-CASE-ARC-10138-1 US-PATENT-APPL-SN-774733 US-PATENT-CLASS-250-83.3H US-PATENT-CLASS-317-247 US-PATENT-CLASS-324-61R US-PATENT-CLASS-73-355R US-PATENT-3,657,644			
N72-22619* #	c 21	NASA-CASE-ARC-10179-1 US-PATENT-APPL-SN-835058 US-PATENT-CLASS-244-114 US-PATENT-CLASS-340-26 US-PATENT-3,624,598	N72-24522* #	c 15	NASA-CASE-NPO-11036 US-PATENT-APPL-SN-41346			
N72-22673* #	c 23	NASA-CASE-XER-07896-2 US-PATENT-APPL-SN-36819 US-PATENT-CLASS-350-310 US-PATENT-3,620,606						
N72-22769* #	c 28	NASA-CASE-ARC-10106-1 US-PATENT-APPL-SN-812998 US-PATENT-CLASS-244-3.22 US-PATENT-3,612,442						
N72-22770* #	c 28	NASA-CASE-LEW-10770-1 US-PATENT-APPL-SN-880246						

		US-PATENT-CLASS-333-81R	US-PATENT-CLASS-321-18	US-PATENT-CLASS-73-421.5R
		US-PATENT-CLASS-333-98P	US-PATENT-CLASS-321-2	US-PATENT-CLASS-73-422GC
		US-PATENT-CLASS-333-98R	US-PATENT-3,659,184	US-PATENT-CLASS-73-422TC
		US-PATENT-CLASS-333-98S	N72-25252* # c 09	US-PATENT-3,662,604
		US-PATENT-3,649,935	US-PATENT-APPL-SN-39342	US-PATENT-CLASS-ERC-10174
N72-25171* # c 07		NASA-CASE-MFS-21042	US-PATENT-CLASS-321-11	US-PATENT-APPL-SN-39344
		US-PATENT-APPL-SN-86417	US-PATENT-CLASS-321-18	US-PATENT-CLASS-250-209
		US-PATENT-CLASS-102-34.4	US-PATENT-CLASS-321-19	US-PATENT-CLASS-250-226
		US-PATENT-CLASS-325-114	US-PATENT-CLASS-321-2	US-PATENT-CLASS-250-83.3UV
		US-PATENT-CLASS-325-4	US-PATENT-CLASS-321-45ER	US-PATENT-CLASS-350-203
		US-PATENT-CLASS-343-6.5R	US-PATENT-CLASS-321-45R	US-PATENT-3,657,549
		US-PATENT-3,667,044	US-PATENT-3,663,940	N72-25410* # c 14
N72-25172* # c 07		NASA-CASE-NPO-11358	N72-25253* # c 09	NASA-CASE-ERC-10292
		US-PATENT-APPL-SN-116786	NASA-CASE-GSC-11126-1	US-PATENT-APPL-SN-45519
		US-PATENT-CLASS-179-15BV	US-PATENT-APPL-SN-98640	US-PATENT-CLASS-350-180R
		US-PATENT-CLASS-340-172.5	US-PATENT-CLASS-321-2	US-PATENT-CLASS-73-515
		US-PATENT-3,665,417	US-PATENT-CLASS-321-47	US-PATENT-CLASS-73-521
N72-25173* # c 07		NASA-CASE-ERC-10324	US-PATENT-CLASS-331-113A	US-PATENT-3,657,928
		US-PATENT-APPL-SN-54270	US-PATENT-3,663,941	N72-25411* # c 14
		US-PATENT-CLASS-178-69.5	N72-25254* # c 09	NASA-CASE-MSC-15626-1
		US-PATENT-CLASS-325-141	NASA-CASE-NPO-10760	US-PATENT-APPL-SN-94374
		US-PATENT-CLASS-325-302	US-PATENT-APPL-SN-129071	US-PATENT-CLASS-116-114AH
		US-PATENT-CLASS-325-325	US-PATENT-CLASS-321-2	US-PATENT-CLASS-73-12
		US-PATENT-CLASS-325-38	US-PATENT-CLASS-321-45R	US-PATENT-CLASS-73-492
		US-PATENT-CLASS-325-51	US-PATENT-CLASS-331-113A	US-PATENT-3,656,352
		US-PATENT-CLASS-325-55	US-PATENT-3,663,944	N72-25412* # c 14
		US-PATENT-CLASS-325-58	N72-25255* # c 09	NASA-CASE-MFS-15063
		US-PATENT-CLASS-325-64	NASA-CASE-LAR-10620-1	US-PATENT-APPL-SN-51477
		US-PATENT-CLASS-340-167	US-PATENT-APPL-SN-125979	US-PATENT-CLASS-178-DIG.8
		US-PATENT-3,665,313	US-PATENT-CLASS-310-10	US-PATENT-CLASS-178-6.8
N72-25174* # c 07		NASA-CASE-NPO-11264	US-PATENT-CLASS-310-15	US-PATENT-CLASS-340-227R
		US-PATENT-APPL-SN-36531	US-PATENT-3,663,843	US-PATENT-3,659,043
		US-PATENT-CLASS-343-762	N72-25256* # c 09	NASA-CASE-XLA-02609
		US-PATENT-CLASS-343-777	US-PATENT-APPL-SN-41347	US-PATENT-APPL-SN-889420
		US-PATENT-CLASS-343-779	US-PATENT-CLASS-333-79	US-PATENT-CLASS-195-127
		US-PATENT-CLASS-343-786	US-PATENT-CLASS-339-143R	US-PATENT-3,666,631
		US-PATENT-CLASS-343-853	US-PATENT-CLASS-339-147R	N72-25414* # c 14
		US-PATENT-3,665,481	US-PATENT-3,663,929	NASA-CASE-NPO-11311
N72-25206* # c 08		NASA-CASE-KSC-10397	N72-25257* # c 09	US-PATENT-APPL-SN-57252
		US-PATENT-APPL-SN-25488	NASA-CASE-MSC-12395	US-PATENT-CLASS-178-7.92
		US-PATENT-CLASS-235-154	US-PATENT-APPL-SN-134573	US-PATENT-CLASS-350-175FS
		US-PATENT-CLASS-340-347DA	US-PATENT-CLASS-307-233	US-PATENT-3,663,753
		US-PATENT-3,648,275	US-PATENT-CLASS-324-186	N72-25428* # c 14
N72-25207* # c 08		NASA-CASE-NPO-11161	US-PATENT-CLASS-324-78D	NASA-CASE-HQN-10756-1
		US-PATENT-APPL-SN-889374	US-PATENT-CLASS-328-136	US-PATENT-APPL-SN-236052
		US-PATENT-CLASS-340-146.1	US-PATENT-CLASS-328-140	N72-25447* # c 15
		US-PATENT-CLASS-340-172.5	US-PATENT-3,663,885	NASA-CASE-LEW-10489-1
		US-PATENT-3,648,256	N72-25258* # c 09	US-PATENT-APPL-SN-889682
N72-25208* # c 08		NASA-CASE-NPO-11338	NASA-CASE-LAR-10253-1	US-PATENT-CLASS-117-107
		US-PATENT-APPL-SN-89212	US-PATENT-APPL-SN-99175	US-PATENT-CLASS-117-211
		US-PATENT-CLASS-178-50	US-PATENT-CLASS-307-88.3	US-PATENT-CLASS-117-217
		US-PATENT-CLASS-179-15BC	US-PATENT-CLASS-330-4.5	US-PATENT-CLASS-117-62
		US-PATENT-CLASS-179-15FD	US-PATENT-3,663,886	US-PATENT-CLASS-117-93.16D
		US-PATENT-CLASS-325-62	N72-25259* # c 09	US-PATENT-CLASS-29-599
		US-PATENT-CLASS-332-21	NASA-CASE-GSC-10695-1	US-PATENT-3,649,356
		US-PATENT-3,659,053	US-PATENT-APPL-SN-889422	N72-25448* # c 15
N72-25209* # c 08		NASA-CASE-NPO-11194	US-PATENT-CLASS-117-200	NASA-CASE-LEW-10450-1
		US-PATENT-APPL-SN-63532	US-PATENT-CLASS-136-89	US-PATENT-APPL-SN-880271
		US-PATENT-CLASS-343-12R	US-PATENT-CLASS-29-198	US-PATENT-CLASS-75-0.58B
		US-PATENT-CLASS-343-14	US-PATENT-3,664,874	US-PATENT-CLASS-75-206
		US-PATENT-CLASS-343-6.5R	N72-25260* # c 09	US-PATENT-CLASS-75-213
		US-PATENT-3,659,292	NASA-CASE-NPO-11283	US-PATENT-3,649,242
N72-25210* # c 08		NASA-CASE-NPO-10636	US-PATENT-APPL-SN-118270	N72-25450* # c 15
		US-PATENT-APPL-SN-77221	US-PATENT-CLASS-310-4	US-PATENT-APPL-SN-66004
		US-PATENT-CLASS-235-152	US-PATENT-3,663,839	US-PATENT-CLASS-285-DIG.21
		US-PATENT-CLASS-340-146.1AL	N72-25261* # c 09	US-PATENT-CLASS-285-316
		US-PATENT-3,662,337	NASA-CASE-ERC-10224	US-PATENT-CLASS-285-33
N72-25247* # c 09		NASA-CASE-LAR-10163-1	US-PATENT-APPL-SN-868775	US-PATENT-CLASS-339-45M
		US-PATENT-APPL-SN-73310	US-PATENT-CLASS-29-492	US-PATENT-CLASS-339-91B
		US-PATENT-CLASS-343-708	US-PATENT-CLASS-29-497	US-PATENT-3,656,781
		US-PATENT-CLASS-343-771	US-PATENT-CLASS-29-498	N72-25451* # c 15
		US-PATENT-CLASS-343-873	US-PATENT-CLASS-29-502	NASA-CASE-NPO-10606
		US-PATENT-3,653,052	US-PATENT-CLASS-29-589	US-PATENT-APPL-SN-8636
N72-25248* # c 09		NASA-CASE-NPO-11342	US-PATENT-CLASS-29-628	US-PATENT-CLASS-251-360
		US-PATENT-APPL-SN-89209	US-PATENT-3,665,589	US-PATENT-3,658,295
		US-PATENT-CLASS-340-172.5	N72-25262* # c 09	NASA-CASE-NPO-11078
		US-PATENT-CLASS-340-324A	US-PATENT-APPL-SN-82280	US-PATENT-APPL-SN-82280
		US-PATENT-3,648,250	US-PATENT-CLASS-307-103	US-PATENT-CLASS-307-83
N72-25249* # c 09		NASA-CASE-GSC-10656-1	US-PATENT-CLASS-323-48	US-PATENT-CLASS-323-82
		US-PATENT-APPL-SN-59969	US-PATENT-3,663,828	US-PATENT-3,663,828
		US-PATENT-CLASS-321-2	N72-25284* # c 11	NASA-CASE-LAR-10507-1
		US-PATENT-CLASS-323-DIG.1	US-PATENT-APPL-SN-874177	US-PATENT-CLASS-195-127
		US-PATENT-CLASS-323-17	US-PATENT-CLASS-195-127	US-PATENT-3,649,462
		US-PATENT-CLASS-323-22T	N72-25287* # c 11	NASA-CASE-LAR-10546-1
		US-PATENT-3,621,372	US-PATENT-APPL-SN-32664	US-PATENT-CLASS-204-49
N72-25250* # c 09		NASA-CASE-KSC-10585	US-PATENT-CLASS-287-54A	US-PATENT-CLASS-250-65F
		US-PATENT-APPL-SN-98517	US-PATENT-CLASS-52-648	US-PATENT-CLASS-96-36.2
		US-PATENT-CLASS-315-135	US-PATENT-CLASS-52-855	US-PATENT-3,658,569
		US-PATENT-CLASS-315-349	US-PATENT-3,665,670	N72-25453* # c 15
		US-PATENT-CLASS-330-2	N72-25288* # c 11	NASA-CASE-KSC-10513
		US-PATENT-CLASS-330-59	NASA-CASE-MFS-20434	US-PATENT-CLASS-187-1
		US-PATENT-CLASS-340-332	US-PATENT-APPL-SN-55534	US-PATENT-CLASS-187-20
		US-PATENT-3,659,148	US-PATENT-CLASS-73-140	US-PATENT-CLASS-187-95
N72-25251* # c 09		NASA-CASE-ERC-10048	US-PATENT-CLASS-73-161	US-PATENT-CLASS-254-190
		US-PATENT-APPL-SN-10329	US-PATENT-3,665,758	US-PATENT-3,666,051
		US-PATENT-CLASS-307-261	N72-25292* # c 12	NASA-CASE-MSC-12233-1
			US-PATENT-APPL-SN-82648	US-PATENT-APPL-SN-73422
			US-PATENT-CLASS-210-188	US-PATENT-CLASS-52-169
			US-PATENT-CLASS-310-11	US-PATENT-CLASS-52-173
			US-PATENT-3,648,083	US-PATENT-CLASS-52-594
			N72-25323* # c 13	US-PATENT-3,665,669
			NASA-CASE-NPO-11373	US-PATENT-3,665,669
			US-PATENT-APPL-SN-81095	N72-25455* # c 15
				NASA-CASE-NPO-11095

		US-PATENT-APPL-SN-19585	N72-25913* #	c 33	NASA-CASE-XMS-09690	N72-27412* #	c 14	NASA-CASE-MFS-20523
		US-PATENT-CLASS-239-424			US-PATENT-APPL-SN-853641			US-PATENT-APPL-SN-77786
		US-PATENT-CLASS-60-258			US-PATENT-CLASS-73-15R			US-PATENT-CLASS-73-103
		US-PATENT-CLASS-60-39.74A			US-PATENT-3,665,750			US-PATENT-CLASS-73-71.6
		US-PATENT-3,662,547			NASA-CASE-NPO-10753			US-PATENT-3,670,563
N72-25456* #	c 15	NASA-CASE-NPO-11222	N72-26031* #	c 03	US-PATENT-APPL-SN-844355	N72-27484* #	c 15	NASA-CASE-NPO-10721
		US-PATENT-APPL-SN-59693			US-PATENT-CLASS-136-202			US-PATENT-APPL-SN-59698
		US-PATENT-CLASS-310-68			US-PATENT-3,666,566			US-PATENT-CLASS-248-188.4
		US-PATENT-CLASS-310-80	N72-26371* #	c 15	NASA-CASE-NPO-10244	N72-27485* #	c 15	US-PATENT-3,669,393
		US-PATENT-CLASS-310-83			US-PATENT-APPL-SN-43327			NASA-CASE-XLA-09643
		US-PATENT-3,660,704			US-PATENT-CLASS-308-2A			US-PATENT-APPL-SN-60876
N72-25457* #	c 15	NASA-CASE-ERC-10325			US-PATENT-CLASS-73-136R			US-PATENT-CLASS-83-522
		US-PATENT-APPL-SN-43884			US-PATENT-3,664,185			US-PATENT-CLASS-83-562
		US-PATENT-CLASS-324-158D	N72-27053* #	c 03	NASA-CASE-GSC-10344-1			US-PATENT-CLASS-83-563
		US-PATENT-CLASS-324-158T			US-PATENT-APPL-SN-785078			US-PATENT-CLASS-83-588
		US-PATENT-3,665,307			US-PATENT-CLASS-136-89			US-PATENT-CLASS-83-6
		NASA-CASE-ERC-10283			US-PATENT-3,672,999			US-PATENT-3,668,956
N72-25485* #	c 16	US-PATENT-APPL-SN-39185	N72-27102* #	c 05	NASA-CASE-LAR-10365-1	N72-27728* #	c 23	NASA-CASE-ARC-10160-1
		US-PATENT-CLASS-331-94.5			US-PATENT-APPL-SN-3151			US-PATENT-APPL-SN-867842
		US-PATENT-CLASS-332-7.51			US-PATENT-CLASS-210-103			US-PATENT-CLASS-178-DIG.20
		US-PATENT-3,659,225			US-PATENT-CLASS-210-104			US-PATENT-CLASS-178-6.5
N72-25539* #	c 18	NASA-CASE-LEW-10424-2.2			US-PATENT-CLASS-210-110			US-PATENT-CLASS-350-138
		US-PATENT-APPL-SN-15222			US-PATENT-CLASS-210-137			US-PATENT-3,670,097
		US-PATENT-CLASS-75-DIG.1			US-PATENT-3,670,890	N72-27784* #	c 26	NASA-CASE-LAR-10836-1
		US-PATENT-CLASS-75-208	N72-27103* #	c 05	NASA-CASE-MSC-13648			US-PATENT-APPL-SN-138227
		US-PATENT-CLASS-75-211			US-PATENT-APPL-SN-87222			US-PATENT-CLASS-350-161
		US-PATENT-CLASS-75-226			US-PATENT-CLASS-128-DIG.4			US-PATENT-3,671,105
		US-PATENT-3,653,882			US-PATENT-CLASS-128-2.1E	N72-27959* #	c 33	NASA-CASE-LAR-10800-1
N72-25540* #	c 18	NASA-CASE-ERC-10364			US-PATENT-CLASS-128-417			US-PATENT-APPL-SN-154094
		US-PATENT-APPL-SN-55537			US-PATENT-3,669,110			US-PATENT-CLASS-73-35
		US-PATENT-CLASS-161-127	N72-27144* #	c 06	NASA-CASE-NPO-10768-2			US-PATENT-3,670,559
		US-PATENT-CLASS-161-68			US-PATENT-APPL-SN-770398	N72-28025* #	c 03	NASA-CASE-NPO-10833
		US-PATENT-CLASS-161-7			US-PATENT-APPL-SN-99524			US-PATENT-APPL-SN-885521
		US-PATENT-CLASS-52-DIG.10			US-PATENT-CLASS-260-535H			US-PATENT-CLASS-165-20
		US-PATENT-CLASS-52-80			US-PATENT-CLASS-260-77.5AP			US-PATENT-CLASS-165-3
		US-PATENT-3,663,347			US-PATENT-3,671,497			US-PATENT-CLASS-62-93
N72-25541* #	c 18	NASA-CASE-ERC-10363	N72-27151* #	c 06	NASA-CASE-NPO-10767-2			US-PATENT-3,675,712
		US-PATENT-APPL-SN-57253			US-PATENT-APPL-SN-241061	N72-28225* #	c 09	NASA-CASE-MFS-20757
		US-PATENT-CLASS-161-127			NASA-CASE-LEW-10330-1			US-PATENT-APPL-SN-138006
		US-PATENT-CLASS-161-68	N72-27226* #	c 09	US-PATENT-APPL-SN-110402			US-PATENT-CLASS-339-178MF
		US-PATENT-CLASS-161-7			US-PATENT-CLASS-336-198			US-PATENT-CLASS-339-218M
		US-PATENT-CLASS-52-DIG.10			US-PATENT-CLASS-336-220			US-PATENT-CLASS-339-75MP
		US-PATENT-CLASS-52-80			US-PATENT-CLASS-336-80			US-PATENT-CLASS-339-94M
		US-PATENT-3,663,346			US-PATENT-3,648,209			US-PATENT-3,670,290
N72-25595* #	c 21	NASA-CASE-MSC-13997-1	N72-27227* #	c 09	NASA-CASE-KSC-10644	N72-28240* #	c 10	NASA-CASE-ARC-10265-1
		US-PATENT-APPL-SN-59966			US-PATENT-APPL-SN-114849			US-PATENT-APPL-SN-64709
		US-PATENT-CLASS-244-15A			US-PATENT-CLASS-307-118			US-PATENT-CLASS-324-41
		US-PATENT-CLASS-244-23A			US-PATENT-CLASS-307-92			US-PATENT-CLASS-340-256
		US-PATENT-3,662,973			US-PATENT-CLASS-340-240			US-PATENT-3,676,772
N72-25619* #	c 23	NASA-CASE-NPO-10634			US-PATENT-3,673,424	N72-28241* #	c 10	NASA-CASE-GSC-10786-1
		US-PATENT-APPL-SN-112999	N72-27228* #	c 09	NASA-CASE-NPO-10542			US-PATENT-APPL-SN-773072
		US-PATENT-CLASS-62-475			US-PATENT-APPL-SN-767741			US-PATENT-CLASS-330-29
		US-PATENT-CLASS-62-6			US-PATENT-CLASS-310-4			US-PATENT-3,633,006
		US-PATENT-CLASS-62-80			US-PATENT-3,673,440	N72-28436* #	c 14	NASA-CASE-XLA-08683
		US-PATENT-CLASS-62-85	N72-27246* #	c 10	NASA-CASE-ERC-10015-2			US-PATENT-APPL-SN-10827
		US-PATENT-3,656,313			US-PATENT-APPL-SN-763744			US-PATENT-CLASS-33-15A
N72-25679* #	c 26	NASA-CASE-XER-07895			US-PATENT-APPL-SN-97343			US-PATENT-CLASS-33-75R
		US-PATENT-APPL-SN-651827			US-PATENT-CLASS-313-309			US-PATENT-3,675,332
		US-PATENT-CLASS-317-234J			US-PATENT-CLASS-313-336	N72-28437* #	c 14	NASA-CASE-ERC-10081
		US-PATENT-CLASS-317-235A			US-PATENT-CLASS-313-351			US-PATENT-APPL-SN-877990
		US-PATENT-CLASS-317-235AJ			US-PATENT-CLASS-315-36			US-PATENT-CLASS-325-363
		US-PATENT-CLASS-317-235R			US-PATENT-3,671,798			US-PATENT-CLASS-343-100ME
		US-PATENT-CLASS-331-107G	N72-27262* #	c 11	NASA-CASE-MFS-20620			US-PATENT-CLASS-343-112D
		US-PATENT-3,667,010			US-PATENT-APPL-SN-154935			US-PATENT-CLASS-73-355
N72-25680* #	c 26	NASA-CASE-ERC-10275			US-PATENT-CLASS-73-117.1			US-PATENT-3,665,467
		US-PATENT-APPL-SN-47061			US-PATENT-CLASS-73-432SD	N72-28438* #	c 14	NASA-CASE-XLA-04890-2
		US-PATENT-CLASS-324-92			US-PATENT-3,670,564			US-PATENT-APPL-SN-577548
		US-PATENT-CLASS-324-96	N72-27406* #	c 14	NASA-CASE-NPO-11147			US-PATENT-APPL-SN-763040
		US-PATENT-CLASS-340-324R			US-PATENT-APPL-SN-83195			US-PATENT-CLASS-148-187
		US-PATENT-CLASS-350-150			US-PATENT-CLASS-324-79R			US-PATENT-3,549,435
		US-PATENT-CLASS-350-160R			US-PATENT-CLASS-328-169	N72-28495* #	c 15	NASA-CASE-MFS-14405
		US-PATENT-3,667,039			US-PATENT-CLASS-331-44			US-PATENT-APPL-SN-73283
N72-25699* #	c 27	NASA-CASE-NPO-12000			US-PATENT-3,670,241			US-PATENT-CLASS-214-1CM
		US-PATENT-APPL-SN-74861	N72-27409* #	c 14	NASA-CASE-NPO-11201			US-PATENT-CLASS-74-469
		US-PATENT-CLASS-149-19			US-PATENT-APPL-SN-77220			US-PATENT-3,631,737
		US-PATENT-CLASS-149-20			US-PATENT-CLASS-250-203R	N72-28496* #	c 15	NASA-CASE-MFS-20433
		US-PATENT-CLASS-149-36			US-PATENT-CLASS-250-225			US-PATENT-APPL-SN-114847
		US-PATENT-CLASS-149-92			US-PATENT-CLASS-350-147			US-PATENT-CLASS-52-1
		US-PATENT-3,658,608			US-PATENT-CLASS-356-141			US-PATENT-CLASS-52-573
N72-25842* #	c 31	NASA-CASE-MSC-12372-1			US-PATENT-CLASS-356-152			US-PATENT-3,675,376
		US-PATENT-APPL-SN-84391			US-PATENT-3,670,168	N72-28521* #	c 16	NASA-CASE-NPO-11437
		US-PATENT-CLASS-95-12.5	N72-27410* #	c 14	NASA-CASE-XLE-05230			US-PATENT-APPL-SN-63144
		US-PATENT-3,662,661			US-PATENT-APPL-SN-877717			US-PATENT-CLASS-330-4
N72-25877* #	c 32	NASA-CASE-LAR-10270-1			US-PATENT-CLASS-136-233			US-PATENT-CLASS-331-94
		US-PATENT-APPL-SN-60881			US-PATENT-3,671,329			US-PATENT-3,676,787
		US-PATENT-CLASS-73-100	N72-27411* #	c 14	NASA-CASE-MSC-12293-1			NASA-CASE-XLE-06481-2
		US-PATENT-CLASS-73-15.6			US-PATENT-APPL-SN-59956			US-PATENT-APPL-SN-156778
		US-PATENT-3,665,751			US-PATENT-CLASS-250-205			US-PATENT-APPL-SN-853855
N72-25911* #	c 33	NASA-CASE-LEW-10359			US-PATENT-CLASS-315-151			US-PATENT-CLASS-266-24
		US-PATENT-APPL-SN-47063			US-PATENT-CLASS-315-156			US-PATENT-3,675,910
		US-PATENT-CLASS-102-105			US-PATENT-CLASS-315-158	N72-28536* #	c 17	NASA-CASE-XLE-03940-2
		US-PATENT-CLASS-60-200A			US-PATENT-CLASS-315-297			US-PATENT-APPL-SN-539255
		US-PATENT-CLASS-60-265			US-PATENT-CLASS-315-307			US-PATENT-APPL-SN-793857
		US-PATENT-CLASS-60-267			US-PATENT-CLASS-315-310			US-PATENT-CLASS-29-182.5
		US-PATENT-CLASS-62-467			US-PATENT-CLASS-315-311			US-PATENT-3,676,084
		US-PATENT-3,656,317			US-PATENT-3,670,202	N72-28761* #	c 26	NASA-CASE-NPO-11776

		US-PATENT-APPL-SN-162230	N72-32487* #	c 15	NASA-CASE-LAR-10541-1	N73-12214* #	c 09	NASA-CASE-NPO-13091-1
		US-PATENT-CLASS-29-570			US-PATENT-APPL-SN-138229			US-PATENT-APPL-SN-290022
		US-PATENT-CLASS-317-230			US-PATENT-CLASS-118-49.1	N73-12244* #	c 10	NASA-CASE-NPO-11631
		US-PATENT-CLASS-317-261			US-PATENT-CLASS-204-298			US-PATENT-APPL-SN-123253
		US-PATENT-CLASS-317-261			US-PATENT-CLASS-219-121P			US-PATENT-CLASS-179-1P
N72-28762* #	c 26	NASA-CASE-LAR-10294-1			US-PATENT-CLASS-219-273			US-PATENT-CLASS-325-473
		US-PATENT-APPL-SN-796685			US-PATENT-CLASS-219-273			US-PATENT-CLASS-325-480
		US-PATENT-CLASS-106-39	N72-32688* #	c 25	NASA-CASE-MFS-20589			US-PATENT-CLASS-325-480
		US-PATENT-CLASS-106-46			US-PATENT-APPL-SN-103077	N73-12264* #	c 11	NASA-CASE-LAR-10348-1
		US-PATENT-CLASS-117-212			US-PATENT-CLASS-313-231			US-PATENT-APPL-SN-70032
		US-PATENT-CLASS-117-217			US-PATENT-CLASS-315-111			US-PATENT-CLASS-73-147
		US-PATENT-CLASS-29-25.42			US-PATENT-CLASS-3693,002			US-PATENT-CLASS-3695,101
		US-PATENT-CLASS-29-25.42	N72-33072* #	c 04	NASA-CASE-ERC-10338	N73-12265* #	c 11	NASA-CASE-NPO-10890
		US-PATENT-CLASS-29-25.42			US-PATENT-APPL-SN-50339			US-PATENT-APPL-SN-99903
N72-29172* #	c 09	NASA-CASE-LAR-10511-1			US-PATENT-CLASS-23-109			US-PATENT-CLASS-137-559
		US-PATENT-APPL-SN-41345			US-PATENT-CLASS-3679,360			US-PATENT-CLASS-219-203
		US-PATENT-CLASS-333-24R	N72-33096* #	c 05	NASA-CASE-MSC-13540-1			US-PATENT-CLASS-219-522
		US-PATENT-CLASS-333-98P			US-PATENT-APPL-SN-68023			US-PATENT-CLASS-52-171
		US-PATENT-CLASS-333-98R			US-PATENT-CLASS-99-80PS			US-PATENT-CLASS-3696,833
		US-PATENT-CLASS-3676,809			US-PATENT-CLASS-3692,533	N73-12444* #	c 14	NASA-CASE-GSC-10903-1
N72-29464* #	c 14	NASA-CASE-ARC-10017-1			US-PATENT-CLASS-12259-2			US-PATENT-APPL-SN-114846
		US-PATENT-APPL-SN-55536			US-PATENT-APPL-SN-61895			US-PATENT-CLASS-250-41.9G
		US-PATENT-CLASS-250-41.9D			US-PATENT-APPL-SN-853763			US-PATENT-CLASS-250-41.9S
		US-PATENT-CLASS-250-71.5R			US-PATENT-CLASS-325-373			US-PATENT-CLASS-73-421.5
		US-PATENT-CLASS-313-356			US-PATENT-CLASS-3694,753			US-PATENT-CLASS-3,700,893
		US-PATENT-CLASS-3676,674	N72-33172* #	c 08	NASA-CASE-NPO-11630	N73-12445* #	c 14	NASA-CASE-LAR-10728-1
N72-29488* #	c 15	NASA-CASE-XLE-10326-2			US-PATENT-APPL-SN-143078			US-PATENT-APPL-SN-112998
		US-PATENT-APPL-SN-54540			US-PATENT-CLASS-179-15.55R			US-PATENT-CLASS-250-83.3H
		US-PATENT-APPL-SN-723465			US-PATENT-CLASS-3694,581			US-PATENT-CLASS-250-83.3R
		US-PATENT-CLASS-277-25			US-PATENT-CLASS-11129			US-PATENT-CLASS-250-83R
		US-PATENT-CLASS-277-27	N72-33204* #	c 09	NASA-CASE-NPO-11129			US-PATENT-CLASS-250-83R
		US-PATENT-CLASS-277-74			US-PATENT-APPL-SN-883523	N73-12446* #	c 14	NASA-CASE-NPO-11239
		US-PATENT-CLASS-3675,935			US-PATENT-CLASS-307-262			US-PATENT-APPL-SN-89211
N72-31140* #	c 06	NASA-CASE-MSC-13335-1			US-PATENT-CLASS-307-295			US-PATENT-CLASS-356-106
		US-PATENT-APPL-SN-55806			US-PATENT-CLASS-328-155			US-PATENT-CLASS-356-114
		US-PATENT-CLASS-55-16			US-PATENT-CLASS-328-24			US-PATENT-CLASS-356-114
		US-PATENT-CLASS-55-55			US-PATENT-CLASS-3621,406	N73-12447* #	c 14	NASA-CASE-NPO-11493
		US-PATENT-CLASS-3676,654			US-PATENT-CLASS-10835-1			US-PATENT-APPL-SN-151413
N72-31141* #	c 06	NASA-CASE-ARC-10308-1			US-PATENT-APPL-SN-116778			US-PATENT-CLASS-136-224
		US-PATENT-APPL-SN-134568			US-PATENT-CLASS-317-101A			US-PATENT-CLASS-3,700,503
		US-PATENT-CLASS-250-43.5R			US-PATENT-CLASS-317-235	N73-12486* #	c 15	NASA-CASE-KSC-10615
		US-PATENT-CLASS-356-51			US-PATENT-CLASS-317-235A			US-PATENT-APPL-SN-103078
		US-PATENT-CLASS-3679,899			US-PATENT-CLASS-317-235AJ			US-PATENT-CLASS-244-1SB
N72-31226* #	c 08	NASA-CASE-NPO-11016			US-PATENT-CLASS-3694,700			US-PATENT-CLASS-244-135
		US-PATENT-APPL-SN-889584	N72-33230* #	c 10	NASA-CASE-GSC-11340-1			US-PATENT-CLASS-62-45
		US-PATENT-CLASS-235-150.1			US-PATENT-APPL-SN-107379			US-PATENT-CLASS-62-7
		US-PATENT-CLASS-235-151.1			US-PATENT-CLASS-330-12			US-PATENT-CLASS-62-7
		US-PATENT-CLASS-235-92MT			US-PATENT-CLASS-331-115			US-PATENT-CLASS-62-7
		US-PATENT-CLASS-323-19			US-PATENT-CLASS-331-116R	N73-12487* #	c 15	NASA-CASE-FRC-10019
		US-PATENT-CLASS-340-347AD			US-PATENT-CLASS-333-80T			US-PATENT-APPL-SN-880398
		US-PATENT-CLASS-3681,581			US-PATENT-CLASS-3693,105			US-PATENT-CLASS-204-192
N72-31235* #	c 09	NASA-CASE-ERC-10214	N72-33377* #	c 14	NASA-CASE-MFS-20760			US-PATENT-CLASS-3,700,575
		US-PATENT-APPL-SN-863914			US-PATENT-APPL-SN-99174	N73-12488* #	c 15	NASA-CASE-ARC-10345-1
		US-PATENT-CLASS-343-770			US-PATENT-CLASS-73-141AB			US-PATENT-APPL-SN-193671
		US-PATENT-CLASS-343-771			US-PATENT-CLASS-73-85			US-PATENT-CLASS-287-85R
		US-PATENT-CLASS-343-786			US-PATENT-CLASS-3693,418			US-PATENT-CLASS-308-2A
		US-PATENT-CLASS-343-797	N72-33476* #	c 15	NASA-CASE-XGS-07805			US-PATENT-CLASS-74-5F
		US-PATENT-CLASS-343-853			US-PATENT-APPL-SN-104884			US-PATENT-CLASS-3,700,291
		US-PATENT-CLASS-3680,142			US-PATENT-CLASS-308-10	N73-12489* #	c 15	NASA-CASE-MSC-12357
N72-31273* #	c 10	NASA-CASE-KSC-10647-1			US-PATENT-CLASS-3694,041			US-PATENT-APPL-SN-662763
		US-PATENT-APPL-SN-774691	N72-33477* #	c 15	NASA-CASE-NPO-11340			US-PATENT-CLASS-264-102
		US-PATENT-CLASS-178-7.5E			US-PATENT-APPL-SN-147997			US-PATENT-CLASS-264-28
		US-PATENT-CLASS-315-22R			US-PATENT-CLASS-137-13			US-PATENT-CLASS-264-36
		US-PATENT-CLASS-315-30R			US-PATENT-CLASS-137-81.5			US-PATENT-CLASS-264-40
		US-PATENT-CLASS-330-27R			US-PATENT-CLASS-60-1			US-PATENT-CLASS-3697,630
		US-PATENT-CLASS-3678,191			US-PATENT-CLASS-60-36	N73-12492* #	c 15	NASA-CASE-XLA-8914
N72-31446* #	c 14	NASA-CASE-ERC-10087-2			US-PATENT-CLASS-3693,346			US-PATENT-APPL-SN-810576
		US-PATENT-APPL-SN-738315	N72-33681* #	c 24	NASA-CASE-LEW-10518-1	N73-12495* #	c 15	NASA-CASE-NPO-13086-1
		US-PATENT-APPL-SN-91642			US-PATENT-APPL-SN-863280			US-PATENT-APPL-SN-292477
		US-PATENT-CLASS-29-588			US-PATENT-CLASS-176-11	N73-12547* #	c 17	NASA-CASE-LAR-10539-1
		US-PATENT-CLASS-317-234D			US-PATENT-CLASS-3694,313			US-PATENT-APPL-SN-136085
		US-PATENT-CLASS-317-234G			US-PATENT-CLASS-11291-1			US-PATENT-CLASS-23-230R
		US-PATENT-CLASS-317-235M	N72-33696* #	c 25	NASA-CASE-GSC-11291-1			US-PATENT-CLASS-3,701,631
		US-PATENT-CLASS-317-235R			US-PATENT-APPL-SN-102412			US-PATENT-CLASS-3,701,631
		US-PATENT-CLASS-3686,542			US-PATENT-CLASS-250-83.6R	N73-12604* #	c 18	NASA-CASE-MFS-20408
N72-31483* #	c 15	NASA-CASE-LAR-10061-1			US-PATENT-CLASS-3694,655			US-PATENT-APPL-SN-71048
		US-PATENT-APPL-SN-104047	N73-12175* #	c 08	NASA-CASE-NPO-11406			US-PATENT-CLASS-161-93
		US-PATENT-CLASS-251-331			US-PATENT-APPL-SN-95183			US-PATENT-CLASS-3,700,538
		US-PATENT-CLASS-251-86			US-PATENT-CLASS-235-152	N73-12884* #	c 30	NASA-CASE-MSC-12391
		US-PATENT-CLASS-3680,830			US-PATENT-CLASS-331-78			US-PATENT-APPL-SN-106465
N72-31637* #	c 21	NASA-CASE-GSC-10945-1			US-PATENT-CLASS-340-146.1AL			US-PATENT-CLASS-244-155
		US-PATENT-APPL-SN-75431			US-PATENT-CLASS-3,700,869			US-PATENT-CLASS-3,700,193
		US-PATENT-CLASS-60-23	N73-12176* #	c 08	NASA-CASE-KSC-10595	N73-13008* #	c 02	NASA-CASE-GSC-11077-1
		US-PATENT-CLASS-60-26			US-PATENT-APPL-SN-98772			US-PATENT-APPL-SN-127618
		US-PATENT-CLASS-3678,685			US-PATENT-CLASS-235-155			US-PATENT-CLASS-244-32
N72-32169* #	c 07	NASA-CASE-NPO-11361			US-PATENT-CLASS-340-347DD			US-PATENT-CLASS-244-32
		US-PATENT-APPL-SN-112988			US-PATENT-CLASS-3697,733	N73-13114* #	c 05	NASA-CASE-MSC-13604-1
		US-PATENT-CLASS-343-781			US-PATENT-CLASS-11371			US-PATENT-APPL-SN-78717
		US-PATENT-CLASS-343-837	N73-12177* #	c 08	NASA-CASE-NPO-11371			US-PATENT-CLASS-128-2N
		US-PATENT-CLASS-343-840			US-PATENT-APPL-SN-117575			US-PATENT-CLASS-273-1E
		US-PATENT-CLASS-343-915			US-PATENT-CLASS-340-146.1AQ			US-PATENT-CLASS-35-22R
		US-PATENT-CLASS-3680,144			US-PATENT-CLASS-340-146.1AV			US-PATENT-CLASS-3698,385
N72-32452* #	c 14	NASA-CASE-MFS-15162			US-PATENT-CLASS-3697,950	N73-13128* #	c 06	NASA-CASE-GSC-11214-1
		US-PATENT-APPL-SN-100639			US-PATENT-CLASS-10412-1			US-PATENT-APPL-SN-115134
		US-PATENT-CLASS-350-79			US-PATENT-CLASS-343-11R			US-PATENT-CLASS-117-35R
		US-PATENT-CLASS-356-241			US-PATENT-CLASS-343-11VB			US-PATENT-CLASS-3,702,775
		US-PATENT-CLASS-3694,094			US-PATENT-CLASS-343-5DP	N73-13129* #	c 06	NASA-CASE-XNP-08124-2
					US-PATENT-CLASS-3696,418			US-PATENT-APPL-SN-97829

N73-13149* #	c 07	US-PATENT-CLASS-75-66 US-PATENT-3,702,762 NASA-CASE-NPO-11302-1 US-PATENT-APPL-SN-70967 US-PATENT-CLASS-178-69.5 US-PATENT-CLASS-235-150.53 US-PATENT-CLASS-235-181 US-PATENT-CLASS-325-325 US-PATENT-CLASS-340-146.1 US-PATENT-3,701,894	N73-13467* #	c 15	US-PATENT-CLASS-91-448 US-PATENT-3,702,575 NASA-CASE-NPO-11369 US-PATENT-APPL-SN-129072 US-PATENT-CLASS-60-1 US-PATENT-CLASS-60-23 US-PATENT-CLASS-60-37 US-PATENT-3,702,532	N73-14469* #	c 15	US-PATENT-CLASS-219-101 US-PATENT-CLASS-219-119 US-PATENT-CLASS-29-203V US-PATENT-3,705,288 NASA-CASE-GSC-10791-1 US-PATENT-APPL-SN-84289 US-PATENT-CLASS-174-52S US-PATENT-CLASS-29-589 US-PATENT-CLASS-29-591 US-PATENT-CLASS-317-234A US-PATENT-CLASS-317-234G US-PATENT-3,705,255
N73-13187* #	c 08	NASA-CASE-GSC-10975-1 US-PATENT-APPL-SN-100996 US-PATENT-CLASS-340-172.5 US-PATENT-3,702,463	N73-13489* #	c 16	NASA-CASE-HQN-10654-1 US-PATENT-APPL-SN-182978 US-PATENT-CLASS-324-.5R US-PATENT-CLASS-331-94 US-PATENT-3,702,972	N73-14584* #	c 18	NASA-CASE-LAR-10894-1 US-PATENT-APPL-SN-189375 US-PATENT-CLASS-106-39R US-PATENT-CLASS-106-55 US-PATENT-CLASS-106-58 US-PATENT-CLASS-106-63 US-PATENT-CLASS-264-DIG.36 US-PATENT-CLASS-264-65 US-PATENT-3,706,583
N73-13208* #	c 09	NASA-CASE-LEW-11192-1 US-PATENT-APPL-SN-198285 US-PATENT-CLASS-315-3.5 US-PATENT-CLASS-315-5.38 US-PATENT-3,702,951	N73-13562* #	c 18	NASA-CASE-ARC-10196-1 US-PATENT-APPL-SN-115082 US-PATENT-CLASS-260-2.5F US-PATENT-3,702,841	N73-14892* #	c 21	NASA-CASE-ERC-10392 US-PATENT-APPL-SN-38534 US-PATENT-CLASS-340-27AT US-PATENT-3,706,970
N73-13209* #	c 09	NASA-CASE-XLA-05099 US-PATENT-APPL-SN-98798 US-PATENT-CLASS-235-152 US-PATENT-CLASS-307-207 US-PATENT-CLASS-307-215 US-PATENT-3,700,868	N73-13643* #	c 21	NASA-CASE-HQN-10703 US-PATENT-APPL-SN-156724 US-PATENT-CLASS-340-27NA US-PATENT-CLASS-340-33 US-PATENT-CLASS-340-97 US-PATENT-CLASS-343-112CA US-PATENT-3,699,511	N73-14853* #	c 31	NASA-CASE-GSC-10590-1 US-PATENT-APPL-SN-130353 US-PATENT-CLASS-102-49.5 US-PATENT-3,706,281
N73-13235* #	c 10	NASA-CASE-KSC-10003 US-PATENT-APPL-SN-60883 US-PATENT-CLASS-178-DIG.6 US-PATENT-CLASS-178-6 US-PATENT-CLASS-307-242 US-PATENT-CLASS-307-259 US-PATENT-CLASS-328-104 US-PATENT-CLASS-328-154 US-PATENT-3,702,898	N73-13644* #	c 21	NASA-CASE-NPO-11481 US-PATENT-APPL-SN-134571 US-PATENT-CLASS-179-100.2A US-PATENT-CLASS-340-174.1R US-PATENT-CLASS-346-138 US-PATENT-CLASS-346-74MD US-PATENT-CLASS-74-5.22 US-PATENT-3,697,968	N73-14854* #	c 31	NASA-CASE-MSC-12433 US-PATENT-APPL-SN-103551 US-PATENT-CLASS-244-155 US-PATENT-3,702,688
N73-13257* #	c 11	NASA-CASE-LAR-10574-1 US-PATENT-APPL-SN-66206 US-PATENT-CLASS-244-1SS US-PATENT-3,698,659	N73-13660* #	c 23	NASA-CASE-MFS-20809 US-PATENT-APPL-SN-173185 US-PATENT-CLASS-315-169R US-PATENT-CLASS-315-169TV US-PATENT-CLASS-317-101A US-PATENT-3,700,961	N73-14855* #	c 31	NASA-CASE-NPO-10680 US-PATENT-APPL-SN-104048 US-PATENT-CLASS-74-2 US-PATENT-3,706,230
N73-13415* #	c 14	NASA-CASE-LAR-10855-1 US-PATENT-APPL-SN-166541 US-PATENT-CLASS-73-147 US-PATENT-CLASS-73-182 US-PATENT-CLASS-73-189 US-PATENT-CLASS-73-212 US-PATENT-3,699,811	N73-13661* #	c 23	NASA-CASE-MSC-12404-1 US-PATENT-APPL-SN-142662 US-PATENT-CLASS-356-106S US-PATENT-3,702,735	N73-15235* #	c 09	NASA-CASE-NPO-12106 US-PATENT-APPL-SN-175881 US-PATENT-CLASS-317-234V US-PATENT-CLASS-317-235AG US-PATENT-CLASS-317-235K US-PATENT-CLASS-331-107G US-PATENT-CLASS-331-177R US-PATENT-CLASS-331-80 US-PATENT-3,694,771
N73-13416* #	c 14	NASA-CASE-GSC-11302-1 US-PATENT-APPL-SN-168650 US-PATENT-CLASS-73-71.6 US-PATENT-3,699,807	N73-13662* #	c 23	NASA-CASE-MFS-20243 US-PATENT-APPL-SN-59894 US-PATENT-CLASS-250-51.5 US-PATENT-CLASS-250-52 US-PATENT-3,702,933	N73-16106* #	c 06	NASA-CASE-LAR-10868-1 US-PATENT-APPL-SN-172459 US-PATENT-CLASS-23-232E US-PATENT-CLASS-23-232R US-PATENT-CLASS-23-254E US-PATENT-CLASS-23-254R US-PATENT-CLASS-250-71R US-PATENT-CLASS-250-83.3UV US-PATENT-3,709,663
N73-13417* #	c 14	NASA-CASE-XLE-05230-2 US-PATENT-APPL-SN-147098 US-PATENT-APPL-SN-877717 US-PATENT-CLASS-136-233 US-PATENT-CLASS-29-573 US-PATENT-CLASS-29-624 US-PATENT-3,699,645	N73-13773* #	c 28	NASA-CASE-LEW-10374-1 US-PATENT-APPL-SN-107380 US-PATENT-CLASS-137-81.5 US-PATENT-CLASS-60-211 US-PATENT-CLASS-60-240 US-PATENT-CLASS-60-243 US-PATENT-3,702,536	N73-16121* #	c 07	NASA-CASE-NPO-11572 US-PATENT-APPL-SN-125234 US-PATENT-CLASS-179-15AN US-PATENT-CLASS-179-15BC US-PATENT-CLASS-325-60 US-PATENT-CLASS-343-200 US-PATENT-3,710,257
N73-13418* #	c 14	NASA-CASE-MFS-14216 US-PATENT-APPL-SN-50208 US-PATENT-CLASS-137-487.5 US-PATENT-CLASS-137-81 US-PATENT-CLASS-92-49 US-PATENT-3,698,412	N73-13898* #	c 31	NASA-CASE-LAR-10549-1 US-PATENT-APPL-SN-108824 US-PATENT-CLASS-244-139 US-PATENT-CLASS-60-291 US-PATENT-3,700,192	N73-16205* #	c 10	NASA-CASE-NPO-11282 US-PATENT-APPL-SN-101354 US-PATENT-CLASS-325-346 US-PATENT-CLASS-325-419 US-PATENT-3,710,261
N73-13420* #	c 14	NASA-CASE-NPO-11418-1 US-PATENT-APPL-SN-193947 US-PATENT-CLASS-333-81B US-PATENT-CLASS-333-98R US-PATENT-3,702,979	N73-13921* #	c 32	NASA-CASE-MSC-12233-2 US-PATENT-APPL-SN-107298 US-PATENT-CLASS-229-DIG.11 US-PATENT-CLASS-52-284 US-PATENT-CLASS-52-5894 US-PATENT-3,702,520	N73-16206* #	c 10	NASA-CASE-ERC-10285 US-PATENT-APPL-SN-55333 US-PATENT-CLASS-331-45 US-PATENT-CLASS-343-100R US-PATENT-CLASS-343-100SA US-PATENT-CLASS-343-853 US-PATENT-3,710,329
N73-13435* #	c 14	NASA-CASE-GSC-11533-1 US-PATENT-APPL-SN-305013	N73-14130* #	c 07	NASA-CASE-NPO-11681 US-PATENT-APPL-SN-200682 US-PATENT-CLASS-343-782 US-PATENT-CLASS-343-837 US-PATENT-CLASS-343-915 US-PATENT-3,705,406	N73-16483* #	c 14	NASA-CASE-ERC-10226-1 US-PATENT-APPL-SN-124909 US-PATENT-APPL-SN-808822 US-PATENT-CLASS-250-209 US-PATENT-CLASS-250-215 US-PATENT-CLASS-250-217 US-PATENT-CLASS-315-153 US-PATENT-CLASS-340-25 US-PATENT-CLASS-340-27R US-PATENT-3,708,671
N73-13462* #	c 15	NASA-CASE-NPO-11479 US-PATENT-APPL-SN-170440 US-PATENT-CLASS-137-808 US-PATENT-CLASS-137-81.5 US-PATENT-CLASS-138-45 US-PATENT-CLASS-251-122 US-PATENT-3,700,005	N73-14214* #	c 09	NASA-CASE-ARC-10487-1 US-PATENT-APPL-SN-212028 US-PATENT-CLASS-250-205 US-PATENT-CLASS-250-211J US-PATENT-CLASS-250-217SS US-PATENT-CLASS-307-310 US-PATENT-CLASS-307-311 US-PATENT-3,705,316	N73-16484* #	c 14	NASA-CASE-LAR-10739-1 US-PATENT-APPL-SN-134567 US-PATENT-CLASS-250-217F US-PATENT-CLASS-340-228S US-PATENT-CLASS-340-418 US-PATENT-3,708,674
N73-13463* #	c 15	NASA-CASE-MFS-20317 US-PATENT-APPL-SN-67730 US-PATENT-CLASS-173-131 US-PATENT-CLASS-72-447 US-PATENT-CLASS-72-476 US-PATENT-3,699,799	N73-14427* #	c 14	NASA-CASE-NPO-10758 US-PATENT-APPL-SN-81096 US-PATENT-CLASS-352-169 US-PATENT-CLASS-95-12.5 US-PATENT-CLASS-95-59 US-PATENT-3,704,659	N73-16536* #	c 16	NASA-CASE-LAR-10311-1 US-PATENT-APPL-SN-31702 US-PATENT-CLASS-250-199 US-PATENT-CLASS-340-171 US-PATENT-CLASS-350-293 US-PATENT-3,710,122
N73-13464* #	c 15	NASA-CASE-NPO-10812 US-PATENT-APPL-SN-129073 US-PATENT-CLASS-425-113 US-PATENT-CLASS-425-133 US-PATENT-CLASS-425-176 US-PATENT-CLASS-72-258 US-PATENT-3,698,848	N73-14428* #	c 14	NASA-CASE-NPO-10764-1 US-PATENT-APPL-SN-836280 US-PATENT-CLASS-252-408 US-PATENT-3,700,603			
N73-13465* #	c 15	NASA-CASE-LEW-10805-1 US-PATENT-APPL-SN-29917 US-PATENT-CLASS-148-11.5R US-PATENT-3,702,791	N73-14429* #	c 14	NASA-CASE-NPO-11387 US-PATENT-APPL-SN-142719 US-PATENT-CLASS-73-57 US-PATENT-CLASS-73-60 US-PATENT-3,706,221			
N73-13466* #	c 15	NASA-CASE-MFS-20944 US-PATENT-APPL-SN-148756 US-PATENT-CLASS-91-363A	N73-14468* #	c 15	NASA-CASE-LAR-10103-1 US-PATENT-APPL-SN-103230			



N73-16764* #	c 27	NASA-CASE-NPO-12015 US-PATENT-APPL-SN-74862 US-PATENT-CLASS-149-19 US-PATENT-CLASS-149-36 US-PATENT-3,708,359	N73-16918* #	c 33	NASA-CASE-MSC-15567-1 US-PATENT-APPL-SN-87551 US-PATENT-CLASS-204-324 US-PATENT-CLASS-204-325 US-PATENT-CLASS-204-328 US-PATENT-3,708,419	N73-19004* #	c 02	NASA-CASE-ERC-10439 US-PATENT-APPL-SN-54271 US-PATENT-CLASS-244-17.13 US-PATENT-CLASS-244-77D US-PATENT-CLASS-318-489 US-PATENT-3,711,042	N73-19234* #	c 09	NASA-CASE-GSC-11013-1 US-PATENT-APPL-SN-200717 US-PATENT-CLASS-343-754 US-PATENT-CLASS-343-839 US-PATENT-CLASS-343-854 US-PATENT-CLASS-343-895 US-PATENT-3,713,163	N73-19235* #	c 09	NASA-CASE-MFS-20407 US-PATENT-APPL-SN-116777 US-PATENT-CLASS-317-235AM US-PATENT-CLASS-317-235N US-PATENT-CLASS-317-235R US-PATENT-CLASS-317-235T US-PATENT-CLASS-317-235UA US-PATENT-3,714,526	N73-19419* #	c 14	NASA-CASE-LAR-10226-1 US-PATENT-APPL-SN-98774 US-PATENT-CLASS-250-217R US-PATENT-CLASS-95-11.5R US-PATENT-CLASS-95-11R US-PATENT-3,712,195	N73-19420* #	c 14	NASA-CASE-MFS-20774 US-PATENT-APPL-SN-161028 US-PATENT-CLASS-73-84 US-PATENT-3,712,121	N73-19421* #	c 14	NASA-CASE-MFS-20242 US-PATENT-APPL-SN-213004 US-PATENT-CLASS-73-71.6 US-PATENT-3,712,120	N73-19457* #	c 15	NASA-CASE-MFS-20698-2 US-PATENT-APPL-SN-136086 US-PATENT-APPL-SN-3418 US-PATENT-CLASS-423-446 US-PATENT-CLASS-423-625 US-PATENT-3,714,332	N73-19458* #	c 15	NASA-CASE-LAR-10195-1 US-PATENT-APPL-SN-201782 US-PATENT-CLASS-259-4 US-PATENT-3,712,591	N73-19630* #	c 21	NASA-CASE-GSC-11188-2 US-PATENT-APPL-SN-244440	N73-19793* #	c 28	NASA-CASE-LEW-11187-1 US-PATENT-APPL-SN-147922 US-PATENT-CLASS-60-39.28R US-PATENT-3,713,290	N73-20039* #	c 03	NASA-CASE-GSC-10814-1 US-PATENT-APPL-SN-41404 US-PATENT-CLASS-244-15A US-PATENT-CLASS-244-15S US-PATENT-3,715,092	N73-20040* #	c 03	NASA-CASE-NPO-11771 US-PATENT-APPL-SN-200762 US-PATENT-CLASS-244-1.55 US-PATENT-CLASS-250-212 US-PATENT-CLASS-250-234 US-PATENT-CLASS-60-26 US-PATENT-3,715,600	N73-20137* #	c 05	NASA-CASE-LAR-10076-1 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US-PATENT-APPL-SN-120241 US-PATENT-CLASS-417-231 US-PATENT-CLASS-60-25 US-PATENT-3,732,040	N73-24569* #	c 17	NASA-CASE-LEW-10920-1 US-PATENT-APPL-SN-106424 US-PATENT-CLASS-204-192 US-PATENT-3,732,158	N73-24783* #	c 28	NASA-CASE-NPO-11880 US-PATENT-APPL-SN-209535 US-PATENT-CLASS-313-DIG.8 US-PATENT-CLASS-313-63 US-PATENT-CLASS-60-202 US-PATENT-3,313,204 US-PATENT-3,728,861 NASA-CASE-NPO-11559 US-PATENT-APPL-SN-147996 US-PATENT-CLASS-102-49.7 US-PATENT-CLASS-102-49.8 US-PATENT-CLASS-60-254 US-PATENT-CLASS-60-256 US-PATENT-3,729,935	N73-25125* #	c 05	NASA-CASE-MFS-20332-2 US-PATENT-APPL-SN-195061 US-PATENT-APPL-SN-869260 US-PATENT-CLASS-128-142.5 US-PATENT-CLASS-137-538 US-PATENT-CLASS-2-2.1A US-PATENT-3,720,208	N73-25160* #	c 07	NASA-CASE-ARC-10097-2 US-PATENT-APPL-SN-115083 US-PATENT-APPL-SN-768662 US-PATENT-CLASS-325-113 US-PATENT-CLASS-325-139 US-PATENT-CLASS-325-45 US-PATENT-CLASS-325-61 US-PATENT-CLASS-340-207 US-PATENT-CLASS-340-258R US-PATENT-3,719,891	N73-25161* #	c 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US-PATENT-CLASS-313-63  
US-PATENT-CLASS-60-202  
US-PATENT-3,744,247
- N73-27796\* # c 33 ..... NASA-CASE-LAR-10439-1  
US-PATENT-APPL-SN-182033  
US-PATENT-CLASS-356-72  
US-PATENT-CLASS-73-339

		US-PATENT-CLASS-73-432R			US-PATENT-CLASS-219-62			US-PATENT-CLASS-324-29.5
		US-PATENT-CLASS-73-86			US-PATENT-CLASS-27-498			US-PATENT-CLASS-324-57R
		US-PATENT-3,745,816			US-PATENT-CLASS-29-497.5			US-PATENT-CLASS-324-62R
N73-27941* #	c 05	NASA-CASE-MFS-21109-1	N73-28516* #	c 15	NASA-CASE-XNP-01187	N73-30389* #	c 14	NASA-CASE-MFS-20546-2
		US-PATENT-APPL-SN-202769			US-PATENT-APPL-SN-155598			US-PATENT-APPL-SN-11220
		US-PATENT-CLASS-128-2.05R			US-PATENT-CLASS-317-158			US-PATENT-APPL-SN-51317
		US-PATENT-CLASS-128-2.06R			US-PATENT-3,244,943			US-PATENT-CLASS-250-105
		US-PATENT-CLASS-272-73	N73-28573* #	c 17	NASA-CASE-XNP-08876			US-PATENT-CLASS-250-65R
		US-PATENT-CLASS-73-379			US-PATENT-APPL-SN-527331	N73-30390* #	c 14	US-PATENT-3,749,911
		US-PATENT-3,744,480			US-PATENT-CLASS-75-66			US-PATENT-APPL-SN-533659
N73-27980* #	c 06	NASA-CASE-LEW-11325-1	N73-28710* #	c 26	NASA-CASE-XNP-01185			US-PATENT-CLASS-73-4
		US-PATENT-APPL-SN-184960			US-PATENT-APPL-SN-155595			US-PATENT-3,395,565
		US-PATENT-CLASS-117-161P			US-PATENT-CLASS-317-158	N73-30391* #	c 14	NASA-CASE-XLA-05087
		US-PATENT-CLASS-117-228			US-PATENT-3,198,994			US-PATENT-APPL-SN-459407
		US-PATENT-CLASS-161-214			US-PATENT-3,210,010-1			US-PATENT-CLASS-315-111
		US-PATENT-CLASS-161-227	N73-30078* #	c 05	NASA-CASE-MFS-21010-1			US-PATENT-3,394,286
		US-PATENT-CLASS-260-30.2			US-PATENT-APPL-SN-251609	N73-30392* #	c 14	NASA-CASE-MFS-21441-1
		US-PATENT-CLASS-260-30.8DS			US-PATENT-CLASS-73-379			US-PATENT-APPL-SN-231662
		US-PATENT-CLASS-260-32.6N	N73-30097* #	c 06	NASA-CASE-LAR-10670-1			US-PATENT-CLASS-250-394
		US-PATENT-CLASS-260-33.4R			US-PATENT-APPL-SN-59892			US-PATENT-CLASS-250-518
		US-PATENT-CLASS-260-33.6R			US-PATENT-CLASS-149-1			US-PATENT-3,752,986
		US-PATENT-CLASS-260-47CP			US-PATENT-CLASS-149-36	N73-30393* #	c 14	NASA-CASE-GSC-11487-1
		US-PATENT-CLASS-260-65			US-PATENT-CLASS-252-301.4			US-PATENT-APPL-SN-193814
		US-PATENT-CLASS-260-78TF			US-PATENT-CLASS-252-305			US-PATENT-CLASS-250-203
		US-PATENT-CLASS-260-78UA			US-PATENT-CLASS-60-215			US-PATENT-CLASS-350-199
N73-28012* #	c 07	NASA-CASE-NPO-11593-1	N73-30098* #	c 06	US-PATENT-3,751,913			US-PATENT-CLASS-350-204
		US-PATENT-APPL-SN-172807			NASA-CASE-MFS-21040-1			US-PATENT-CLASS-350-55
		US-PATENT-CLASS-179-15FS			US-PATENT-APPL-SN-183240	N73-30394* #	c 14	US-PATENT-3,752,559
		US-PATENT-CLASS-325-419			US-PATENT-CLASS-260-485F			NASA-CASE-LAR-10000
		US-PATENT-CLASS-329-122			US-PATENT-3,752,847			US-PATENT-APPL-SN-613235
		US-PATENT-3,745,255	N73-30099* #	c 06	NASA-CASE-MFS-10512			US-PATENT-CLASS-73-398
N73-28013* #	c 07	NASA-CASE-GSC-11046-1			US-PATENT-APPL-SN-606027			US-PATENT-3,446,075
		US-PATENT-APPL-SN-182399			US-PATENT-CLASS-260-77.5	N73-30395* #	c 14	NASA-CASE-LAR-10623-1
		US-PATENT-CLASS-343-725			US-PATENT-3,463,761			US-PATENT-APPL-SN-214086
		US-PATENT-CLASS-343-729	N73-30100* #	c 06	NASA-CASE-MFS-10506			US-PATENT-CLASS-15-415
		US-PATENT-CLASS-343-797			US-PATENT-APPL-SN-606036			US-PATENT-CLASS-73-28
		US-PATENT-CLASS-343-803			US-PATENT-CLASS-260-77.5			US-PATENT-CLASS-73-421.5R
		US-PATENT-CLASS-343-893			US-PATENT-3,463,762			US-PATENT-3,748,905
		US-PATENT-3,747,111	N73-30101* #	c 06	NASA-CASE-MFS-10507	N73-30457* #	c 15	NASA-CASE-GSC-11149-1
N73-28045* #	c 08	NASA-CASE-XNP-00477			US-PATENT-APPL-SN-605994			US-PATENT-APPL-SN-152849
		US-PATENT-APPL-SN-175497			US-PATENT-CLASS-260-615			US-PATENT-CLASS-254-29A
		US-PATENT-CLASS-340-347			US-PATENT-3,452,103			US-PATENT-CLASS-29-452
		US-PATENT-3,219,997	N73-30102* #	c 06	NASA-CASE-MFS-11492			US-PATENT-CLASS-81-57.38
N73-28083* #	c 09	NASA-CASE-GSC-11215-1			US-PATENT-APPL-SN-707440			US-PATENT-3,749,362
		US-PATENT-APPL-SN-114873			US-PATENT-CLASS-260-2	N73-30458* #	c 15	NASA-CASE-LEW-11087-1
		US-PATENT-CLASS-29-628			US-PATENT-3,577,356			US-PATENT-APPL-SN-201904
		US-PATENT-CLASS-29-629	N73-30103* #	c 06	NASA-CASE-MFS-10509			US-PATENT-CLASS-308-188
		US-PATENT-CLASS-29-630			US-PATENT-APPL-SN-605984			US-PATENT-CLASS-308-193
		US-PATENT-CLASS-29-630A			US-PATENT-CLASS-260-77.5			US-PATENT-3,751,123
		US-PATENT-3,744,128	N73-30113* #	c 07	NASA-CASE-NPO-11628-1	N73-30459* #	c 15	NASA-CASE-MSC-13587-1
N73-28084* #	c 09	NASA-CASE-XNP-03623			US-PATENT-APPL-SN-207211			US-PATENT-APPL-SN-206698
		US-PATENT-APPL-SN-471154			US-PATENT-CLASS-325-420			US-PATENT-CLASS-137-516.27
		US-PATENT-CLASS-178-69.5			US-PATENT-CLASS-325-422			US-PATENT-CLASS-137-535
		US-PATENT-3,402,265			US-PATENT-CLASS-329-120	N73-30460* #	c 15	US-PATENT-3,749,123
N73-28144* #	c 12	NASA-CASE-LAR-10612-1			US-PATENT-3,746,998			NASA-CASE-HQN-10638-1
		US-PATENT-APPL-SN-233173	N73-30115* #	c 07	NASA-CASE-KSC-10654-1			US-PATENT-APPL-SN-212977
		US-PATENT-CLASS-73-147			US-PATENT-APPL-SN-250766			US-PATENT-CLASS-188-1C
		US-PATENT-3,744,305			US-PATENT-CLASS-178-DIG.23			US-PATENT-CLASS-297-386
N73-28486* #	c 14	NASA-CASE-NPO-11749			US-PATENT-CLASS-178-6.60D			US-PATENT-3,749,205
		US-PATENT-APPL-SN-175267			US-PATENT-CLASS-178-6.8	N73-30476* #	c 16	NASA-CASE-MFS-20823-1
		US-PATENT-CLASS-324-52			US-PATENT-CLASS-179-15BS			US-PATENT-APPL-SN-175981
		US-PATENT-CLASS-73-15R			US-PATENT-3,749,831			US-PATENT-CLASS-350-3.5
		US-PATENT-3,737,762	N73-30135* #	c 08	NASA-CASE-NPO-10817-1			US-PATENT-CLASS-356-108
N73-28487* #	c 14	NASA-CASE-XLA-08916-2			US-PATENT-APPL-SN-82649			US-PATENT-CLASS-356-109
		US-PATENT-APPL-SN-777765			US-PATENT-CLASS-250-229			US-PATENT-3,744,912
		US-PATENT-APPL-SN-97472			US-PATENT-CLASS-250-237R	N73-30532* #	c 18	NASA-CASE-ERC-10339-1
		US-PATENT-CLASS-73-170R			US-PATENT-CLASS-250-239			US-PATENT-APPL-SN-43883
		US-PATENT-CLASS-73-432R			US-PATENT-3,745,352			US-PATENT-CLASS-156-285
		US-PATENT-3,744,320	N73-30181* #	c 09	NASA-CASE-MFS-21214-1			US-PATENT-3,745,082
N73-28488* #	c 14	NASA-CASE-LEW-11159-1			US-PATENT-APPL-SN-235269	N73-30640* #	c 21	NASA-CASE-GSC-10890-1
		US-PATENT-APPL-SN-104346			US-PATENT-CLASS-313-161			US-PATENT-APPL-SN-111998
		US-PATENT-CLASS-250-336			US-PATENT-CLASS-315-248			US-PATENT-CLASS-244-15A
		US-PATENT-CLASS-307-308			US-PATENT-CLASS-315-324			US-PATENT-CLASS-250-203R
		US-PATENT-3,745,357			US-PATENT-3,745,410			US-PATENT-CLASS-250-209
N73-28489* #	c 14	NASA-CASE-GSC-11074-1	N73-30185* #	c 09	NASA-CASE-NPO-11738-1			US-PATENT-CLASS-250-236
		US-PATENT-APPL-SN-198362			US-PATENT-APPL-SN-235295			US-PATENT-3,752,993
		US-PATENT-CLASS-34-155			US-PATENT-CLASS-335-296	N73-30641* #	c 21	NASA-CASE-LAR-10717-1
		US-PATENT-CLASS-34-160			US-PATENT-CLASS-335-297			US-PATENT-APPL-SN-242028
		US-PATENT-CLASS-34-162			US-PATENT-3,750,067			US-PATENT-CLASS-343-112CA
		US-PATENT-3,744,148	N73-30205* #	c 10	NASA-CASE-NPO-11307-1			US-PATENT-CLASS-343-6.5R
N73-28490* #	c 14	NASA-CASE-GSC-11444-1			US-PATENT-APPL-SN-169671			US-PATENT-3,750,168
		US-PATENT-APPL-SN-229128			US-PATENT-CLASS-340-277	N73-30685* #	c 23	NASA-CASE-LEW-11326-1
		US-PATENT-CLASS-250-203R			US-PATENT-CLASS-340-279			US-PATENT-APPL-SN-192970
		US-PATENT-CLASS-250-209			US-PATENT-3,750,131			US-PATENT-CLASS-431-173
		US-PATENT-CLASS-250-214R			NASA-CASE-MFS-20658-1			US-PATENT-CLASS-431-9
		US-PATENT-CLASS-356-141	N73-30386* #	c 14	US-PATENT-APPL-SN-205875			US-PATENT-CLASS-60-39.65
		US-PATENT-3,744,913			US-PATENT-CLASS-324-79D			US-PATENT-CLASS-60-39.66
N73-28491* #	c 14	NASA-CASE-XNP-05231			US-PATENT-CLASS-328-129			US-PATENT-CLASS-60-39.72
		US-PATENT-APPL-SN-524746			US-PATENT-CLASS-328-134			US-PATENT-CLASS-60-39.74R
		US-PATENT-CLASS-250-51.5			US-PATENT-CLASS-328-48			US-PATENT-3,748,853
		US-PATENT-3,440,419			US-PATENT-3,745,475	N73-30686* #	c 23	NASA-CASE-GSC-11296-1
N73-28515* #	c 15	NASA-CASE-LEW-10533-1	N73-30388* #	c 14	NASA-CASE-NPO-11291-1			US-PATENT-APPL-SN-228190
		US-PATENT-APPL-SN-134658			US-PATENT-APPL-SN-116790			US-PATENT-CLASS-350-162SF
		US-PATENT-CLASS-219-107						

N73-30829* #	c 31	US-PATENT-CLASS-350-55	N73-32112* #	c 09	US-PATENT-CLASS-331-94.5	N73-32360* #	c 15	NASA-CASE-GSC-11163-1
		US-PATENT-3,752,564			US-PATENT-3,753,148			US-PATENT-APPL-SN-205047
		NASA-CASE-GSC-11018-1			NASA-CASE-ARC-10330-1			US-PATENT-CLASS-117-105
		US-PATENT-APPL-SN-244523			US-PATENT-APPL-SN-151412			US-PATENT-CLASS-117-105.5
		US-PATENT-CLASS-165-105			US-PATENT-CLASS-317-235R			US-PATENT-CLASS-117-130R
N73-31988* #	c 03	US-PATENT-CLASS-165-32	N73-32143* #	c 10	US-PATENT-CLASS-317-235WWW	N73-32361* #	c 15	US-PATENT-CLASS-117-138.8R
		US-PATENT-CLASS-166-47			US-PATENT-3,760,239			US-PATENT-CLASS-117-151
		US-PATENT-CLASS-165-96			NASA-CASE-MSC-13746-1			US-PATENT-CLASS-117-160R
		US-PATENT-CLASS-244-1SS			US-PATENT-APPL-SN-226476			US-PATENT-CLASS-117-66
		US-PATENT-3,749,156			US-PATENT-CLASS-178-18			US-PATENT-CLASS-29-527.2
N73-32011* #	c 05	NASA-CASE-MSC-12396-1	N73-32144* #	c 10	US-PATENT-3,758,718	N73-32362* #	c 15	US-PATENT-CLASS-72-53
		US-PATENT-APPL-SN-258331			NASA-CASE-NPO-11703-1			US-PATENT-3,754,976
		US-PATENT-CLASS-307-18			US-PATENT-APPL-SN-223560			NASA-CASE-XNP-01188
		US-PATENT-CLASS-307-28			US-PATENT-CLASS-340-166			US-PATENT-APPL-SN-155596
		US-PATENT-CLASS-307-29			US-PATENT-CLASS-340-173			US-PATENT-CLASS-317-158
N73-32012* #	c 05	US-PATENT-CLASS-307-38	N73-32145* #	c 10	US-PATENT-CLASS-340-223	N73-32363* #	c 15	US-PATENT-3,262,025
		US-PATENT-3,755,686			US-PATENT-CLASS-340-415			NASA-CASE-XNP-07169
		NASA-CASE-GSC-11169-2			US-PATENT-3,760,394			US-PATENT-APPL-SN-486884
		US-PATENT-APPL-SN-139094			NASA-CASE-MFS-21465-1			US-PATENT-CLASS-175-26
		US-PATENT-APPL-SN-60882			US-PATENT-APPL-SN-218965			US-PATENT-3,375,885
N73-32013* #	c 05	US-PATENT-CLASS-195-127	N73-32152* #	c 11	US-PATENT-CLASS-307-271	N73-32391* #	c 16	NASA-CASE-GSC-11222-1
		US-PATENT-3,756,920			US-PATENT-CLASS-318-230			US-PATENT-APPL-SN-251621
		NASA-CASE-MSC-12609-1			US-PATENT-CLASS-318-231			US-PATENT-CLASS-307-157
		US-PATENT-APPL-SN-750031			US-PATENT-CLASS-318-341			US-PATENT-CLASS-315-DIG.2
		US-PATENT-CLASS-128-1A			US-PATENT-CLASS-331-135			US-PATENT-CLASS-315-101
N73-32014* #	c 05	US-PATENT-CLASS-2-2.1A	N73-32317* #	c 14	US-PATENT-3,760,248	N73-32414* #	c 17	US-PATENT-CLASS-29-196.2
		US-PATENT-CLASS-2-81			NASA-CASE-MSC-13789-1			US-PATENT-CLASS-29-196.6
		US-PATENT-3,751,727			US-PATENT-APPL-SN-186487			US-PATENT-CLASS-29-197
		NASA-CASE-MFS-16570-1			US-PATENT-CLASS-102-95			US-PATENT-3,762,884
		US-PATENT-APPL-SN-228150			US-PATENT-CLASS-188-1C			NASA-CASE-LEW-11267-1
N73-32015* #	c 05	US-PATENT-CLASS-3-1.1	N73-32318* #	c 14	US-PATENT-CLASS-99-6	N73-32415* #	c 17	US-PATENT-APPL-SN-190316
		US-PATENT-CLASS-3-12			US-PATENT-CLASS-89-8			US-PATENT-CLASS-29-196.2
		US-PATENT-CLASS-3-2			US-PATENT-3,763,740			US-PATENT-CLASS-29-196.6
		US-PATENT-CLASS-3-6			NASA-CASE-NPO-12128-1			US-PATENT-CLASS-29-197
		US-PATENT-3,751,733			US-PATENT-APPL-SN-841845			US-PATENT-CLASS-29-197
N73-32016* #	c 05	NASA-CASE-MSC-11561-1	N73-32319* #	c 14	US-PATENT-CLASS-250-207	N73-32437* #	c 18	US-PATENT-3,762,884
		US-PATENT-APPL-SN-146940			US-PATENT-CLASS-250-83.3R			NASA-CASE-LEW-10438-1
		US-PATENT-CLASS-137-535			US-PATENT-CLASS-313-104			US-PATENT-APPL-SN-221083
		US-PATENT-CLASS-272-DIG.1			US-PATENT-3,758,781			US-PATENT-CLASS-73-170
		US-PATENT-CLASS-272-DIG.4			NASA-CASE-KSC-10730-1			US-PATENT-CLASS-75-171
N73-32017* #	c 05	US-PATENT-CLASS-272-DIG.5	N73-32320* #	c 14	US-PATENT-APPL-SN-248469	N73-32437* #	c 18	US-PATENT-3,762,918
		US-PATENT-CLASS-272-79C			US-PATENT-CLASS-324-72			NASA-CASE-MFS-20861-1
		US-PATENT-CLASS-91-186			US-PATENT-3,760,268			US-PATENT-APPL-SN-160860
		US-PATENT-3,758,112			NASA-CASE-KSC-10728-1			US-PATENT-CLASS-75-135
		NASA-CASE-MSC-13436-1			US-PATENT-APPL-SN-292682			US-PATENT-3,752,665
N73-32018* #	c 05	US-PATENT-CLASS-128-2.07	N73-32321* #	c 14	US-PATENT-CLASS-95-11	N73-32528* #	c 22	NASA-CASE-XLE-00209
		US-PATENT-CLASS-128-2.08			US-PATENT-CLASS-95-11.5			US-PATENT-APPL-SN-60276
		US-PATENT-CLASS-73-194E			US-PATENT-3,759,152			US-PATENT-CLASS-176-169
		US-PATENT-CLASS-73-194M			NASA-CASE-GSC-11188-1			US-PATENT-3,759,787
		US-PATENT-3,759,249			US-PATENT-APPL-SN-244440			NASA-CASE-LEW-11015
N73-32019* #	c 06	NASA-CASE-NPO-10998-1	N73-32322* #	c 14	US-PATENT-APPL-SN-80029	N73-32571* #	c 26	US-PATENT-APPL-SN-235266
		NASA-CASE-NPO-10999-1			US-PATENT-CLASS-29-195Y			US-PATENT-CLASS-174-DIG.8
		US-PATENT-APPL-SN-145027			US-PATENT-3,759,872			US-PATENT-CLASS-174-126C
		US-PATENT-CLASS-252-431N			US-PATENT-CLASS-73-103			US-PATENT-CLASS-29-589
		US-PATENT-CLASS-252-431R			US-PATENT-XNP-05530			US-PATENT-CLASS-335-216
N73-32020* #	c 06	US-PATENT-CLASS-260-47UP	N73-32323* #	c 14	US-PATENT-APPL-SN-488381	N73-32606* #	c 28	US-PATENT-3,763,552
		US-PATENT-CLASS-260-567.6M			US-PATENT-CLASS-73-81			NASA-CASE-NPO-12070-1
		US-PATENT-CLASS-260-93.5A			US-PATENT-3,379,052			US-PATENT-APPL-SN-153542
		US-PATENT-CLASS-260-93.5S			NASA-CASE-LAR-10319-1			US-PATENT-CLASS-165-105
		US-PATENT-CLASS-260-94.2M			US-PATENT-APPL-SN-197870			US-PATENT-CLASS-165-141
N73-32021* #	c 06	US-PATENT-CLASS-260-94.2R	N73-32324* #	c 14	US-PATENT-CLASS-95-42	N73-32749* #	c 31	US-PATENT-CLASS-165-185
		US-PATENT-CLASS-260-94.7R			US-PATENT-3,757,659			US-PATENT-CLASS-239-127.1
		US-PATENT-3,755,283			NASA-CASE-LAR-10440-1			US-PATENT-CLASS-60-267
		NASA-CASE-MFS-20979-2			US-PATENT-APPL-SN-229413			US-PATENT-3,759,443
		US-PATENT-APPL-SN-100774			US-PATENT-CLASS-73-103			NASA-CASE-ERC-10385-1
N73-32022* #	c 06	US-PATENT-APPL-SN-218590	N73-32325* #	c 14	US-PATENT-CLASS-73-94	N73-32750* #	c 31	US-PATENT-APPL-SN-99198
		US-PATENT-CLASS-260-448.2D			US-PATENT-3,757,568			US-PATENT-CLASS-287-92
		US-PATENT-3,783,204			US-PATENT-CLASS-250-41.9			US-PATENT-CLASS-52-109
		NASA-CASE-MSC-12458-1			NASA-CASE-LAR-02743			US-PATENT-CLASS-52-64
		US-PATENT-APPL-SN-188927			US-PATENT-APPL-SN-404212			US-PATENT-CLASS-52-646
N73-32023* #	c 08	US-PATENT-CLASS-235-152IE	N73-32326* #	c 14	US-PATENT-CLASS-313-7	N73-32749* #	c 31	US-PATENT-CLASS-52-80
		US-PATENT-CLASS-340-347DA			US-PATENT-3,310,899			US-PATENT-3,757,476
		US-PATENT-3,754,236			NASA-CASE-XNP-04231			NASA-CASE-LEW-11101-1
		NASA-CASE-MFS-20207-1			US-PATENT-APPL-SN-362261			US-PATENT-APPL-SN-175983
		US-PATENT-APPL-SN-239574			US-PATENT-CLASS-250-41.9			US-PATENT-CLASS-244-1SC
N73-32024* #	c 09	US-PATENT-CLASS-318-254	N73-32327* #	c 14	US-PATENT-3,334,225	N73-32751* #	c 31	US-PATENT-CLASS-244-1SS
		US-PATENT-CLASS-318-328			NASA-CASE-ARC-10362-1			US-PATENT-CLASS-47-1.4
		US-PATENT-3,757,183			US-PATENT-APPL-SN-198289			US-PATENT-CLASS-47-1.7
		NASA-CASE-GSC-11368-1			US-PATENT-CLASS-128-2.05F			US-PATENT-3,749,332
		US-PATENT-APPL-SN-237029			US-PATENT-CLASS-73-194EM			NASA-CASE-NPO-11942-1
N73-32025* #	c 09	US-PATENT-CLASS-136-24	N73-32328* #	c 14	US-PATENT-3,751,980	N73-32818* #	c 33	US-PATENT-APPL-SN-268686
		US-PATENT-3,759,746			NASA-CASE-LAR-10483-1			US-PATENT-CLASS-165-106
		NASA-CASE-GSC-11394-1			US-PATENT-APPL-SN-184090			US-PATENT-CLASS-165-32
		US-PATENT-APPL-SN-292698			US-PATENT-CLASS-73-12			US-PATENT-CLASS-165-96
		US-PATENT-CLASS-136-89			US-PATENT-3,763,691			US-PATENT-CLASS-244-1SS
N73-32026* #	c 09	US-PATENT-CLASS-250-212	N73-32358* #	c 15	US-PATENT-CLASS-LEW-11386-1	N73-33076* #	c 06	US-PATENT-3,783,928
		US-PATENT-CLASS-321-1.5			US-PATENT-APPL-SN-289033			NASA-CASE-NPO-10767-1
		US-PATENT-3,760,257			US-PATENT-CLASS-219-117			US-PATENT-APPL-SN-241061
		NASA-CASE-KSC-10729-1			US-PATENT-CLASS-219-91			US-PATENT-APPL-SN-770417
		US-PATENT-APPL-SN-221714			US-PATENT-CLASS-29-497			US-PATENT-CLASS-260-77.5AP
N73-32027* #	c 09	US-PATENT-CLASS-343-112R	N73-32359* #	c 15	US-PATENT-3,758,741	N73-33361* #	c 14	US-PATENT-3,755,265
		US-PATENT-CLASS-343-113R			NASA-CASE-LEW-11152-1			NASA-CASE-ARC-10468-1
		US-PATENT-3,754,263			US-PATENT-APPL-SN-198379			US-PATENT-APPL-SN-288857
		NASA-CASE-ARC-10463-1			US-PATENT-CLASS-308-35			US-PATENT-CLASS-355-18
		US-PATENT-APPL-SN-241615			US-PATENT-CLASS-308-9			US-PATENT-CLASS-95-12

N73-33383* #	c 15	NASA-CASE-LEW-11026-1 US-PATENT-APPL-SN-196970 US-PATENT-CLASS-29-487 US-PATENT-CLASS-29-494 US-PATENT-CLASS-29-497.5 US-PATENT-CLASS-29-498 US-PATENT-3,748,722																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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- N74-14845\* # c 54 ..... NASA-CASE-LAR-10241-1  
US-PATENT-APPL-SN-193672  
US-PATENT-CLASS-9-11A  
US-PATENT-3,781,933
- N74-14920\* # c 62 ..... NASA-CASE-MSC-13932-1  
US-PATENT-APPL-SN-229354  
US-PATENT-CLASS-235-153AK  
US-PATENT-3,783,250
- N74-14935\* # c 33 ..... NASA-CASE-MFS-21462-1  
US-PATENT-APPL-SN-239576  
US-PATENT-CLASS-219-477  
US-PATENT-CLASS-219-539  
US-PATENT-CLASS-338-320  
US-PATENT-3,732,387
- N74-14939\* # c 33 ..... NASA-CASE-FRC-10072-1  
US-PATENT-APPL-SN-162100  
US-PATENT-CLASS-330-10  
US-PATENT-CLASS-330-35  
US-PATENT-CLASS-330-9  
US-PATENT-3,783,399
- N74-14956\* # c 33 ..... NASA-CASE-MSC-17832-1  
US-PATENT-APPL-SN-283727  
US-PATENT-CLASS-307-127  
US-PATENT-CLASS-317-33SC  
US-PATENT-CLASS-317-43  
US-PATENT-CLASS-317-46  
US-PATENT-CLASS-317-47  
US-PATENT-CLASS-317-48  
US-PATENT-3,783,354
- N74-15089\* # c 19 ..... NASA-CASE-LAR-10586-1  
US-PATENT-APPL-SN-289049  
US-PATENT-CLASS-102-70.2R  
US-PATENT-CLASS-244-1SA  
US-PATENT-CLASS-244-3.16  
US-PATENT-CLASS-250-203R  
US-PATENT-CLASS-250-237R  
US-PATENT-3,780,966
- N74-15090\* # c 35 ..... NASA-CASE-NPO-11432-2  
US-PATENT-APPL-SN-258152  
US-PATENT-APPL-SN-88435  
US-PATENT-CLASS-250-211J  
US-PATENT-CLASS-250-214  
US-PATENT-CLASS-317-235N  
US-PATENT-3,781,549
- N74-15091\* # c 35 ..... NASA-CASE-LAR-11155-1  
US-PATENT-APPL-SN-313381  
US-PATENT-CLASS-250-380  
US-PATENT-CLASS-250-361  
US-PATENT-CLASS-250-369  
US-PATENT-CLASS-250-492  
US-PATENT-3,781,562
- N74-15092\* # c 35 ..... NASA-CASE-LAR-10862-1  
US-PATENT-APPL-SN-271951  
US-PATENT-CLASS-73-4V  
US-PATENT-3,780,563
- N74-15093\* # c 35 ..... NASA-CASE-ARC-10442-1  
US-PATENT-APPL-SN-280032  
US-PATENT-CLASS-165-109  
US-PATENT-CLASS-165-2  
US-PATENT-CLASS-259-DIG.18  
US-PATENT-CLASS-259-60  
US-PATENT-CLASS-62-45  
US-PATENT-3,782,698
- N74-15094\* # c 35 ..... NASA-CASE-NPO-13044-1  
US-PATENT-APPL-SN-305012  
US-PATENT-CLASS-73-497  
US-PATENT-CLASS-73-517B  
US-PATENT-CLASS-74-5.6  
US-PATENT-3,782,205
- N74-15095\* # c 74 ..... NASA-CASE-MSC-14096-1  
US-PATENT-APPL-SN-242662  
US-PATENT-CLASS-350-236  
US-PATENT-CLASS-350-285  
US-PATENT-CLASS-350-7  
US-PATENT-CLASS-356-216  
US-PATENT-CLASS-356-43  
US-PATENT-3,782,835
- N74-15125\* # c 37 ..... NASA-CASE-XLE-10326-4  
US-PATENT-APPL-SN-220251  
US-PATENT-APPL-SN-54540  
US-PATENT-APPL-SN-723465  
US-PATENT-CLASS-277-27  
US-PATENT-CLASS-277-91  
US-PATENT-3,782,737
- N74-15126\* # c 35 ..... NASA-CASE-ARC-10441-1  
US-PATENT-APPL-SN-280029  
US-PATENT-CLASS-259-98  
US-PATENT-CLASS-417-470  
US-PATENT-CLASS-417-471  
US-PATENT-3,782,699
- N74-15127\* # c 35 ..... NASA-CASE-NPO-11682-1  
US-PATENT-APPL-SN-187365  
US-PATENT-CLASS-23-284  
US-PATENT-3,782,904
- N74-15128\* # c 37 ..... NASA-CASE-LEW-11087-2  
US-PATENT-APPL-SN-201904
- US-PATENT-APPL-SN-280390  
US-PATENT-CLASS-29-148.4A  
US-PATENT-CLASS-29-148.4B  
US-PATENT-3,781,958
- N74-15130\* # c 38 ..... NASA-CASE-MFS-20767-1  
US-PATENT-APPL-SN-196898  
US-PATENT-CLASS-73-67.8S  
US-PATENT-3,777,552
- N74-15145\* # c 36 ..... NASA-CASE-NPO-11856-1  
US-PATENT-APPL-SN-235268  
US-PATENT-CLASS-250-217SS  
US-PATENT-CLASS-331-94.5K  
US-PATENT-CLASS-331-94.5S  
US-PATENT-CLASS-350-6  
US-PATENT-CLASS-356-152  
US-PATENT-CLASS-356-4  
US-PATENT-CLASS-356-5  
US-PATENT-3,781,111
- N74-15146\* # c 35 ..... NASA-CASE-MFS-21455-1  
US-PATENT-APPL-SN-281877  
US-PATENT-CLASS-350-3.5  
US-PATENT-CLASS-356-106  
US-PATENT-CLASS-73-71.3  
US-PATENT-3,782,825
- N74-15395\* # c 36 ..... NASA-CASE-MFS-21233-1  
US-PATENT-APPL-SN-246056  
US-PATENT-CLASS-324-40  
US-PATENT-CLASS-73-67.5R  
US-PATENT-CLASS-73-71.5U  
US-PATENT-3,782,177
- N74-15453\* # c 07 ..... NASA-CASE-LEW-11569-1  
US-PATENT-APPL-SN-316618  
US-PATENT-CLASS-181-43  
US-PATENT-3,780,827
- N74-15652\* # c 34 ..... NASA-CASE-LAR-10105-1  
US-PATENT-APPL-SN-170680  
US-PATENT-CLASS-73-86  
US-PATENT-3,782,181
- N74-15778\* # c 51 ..... NASA-CASE-ARC-10302-1  
US-PATENT-APPL-SN-203271  
US-PATENT-CLASS-119-51.13  
US-PATENT-CLASS-119-51.5  
US-PATENT-CLASS-119-51R  
US-PATENT-CLASS-119-52AF  
US-PATENT-CLASS-119-54  
US-PATENT-CLASS-221-265  
US-PATENT-3,782,334
- N74-15831\* # c 35 ..... NASA-CASE-GSC-11553-1  
US-PATENT-APPL-SN-177985  
US-PATENT-CLASS-178-6.7R  
US-PATENT-CLASS-219-216  
US-PATENT-CLASS-219-388  
US-PATENT-CLASS-34-162  
US-PATENT-CLASS-346-108  
US-PATENT-CLASS-346-138  
US-PATENT-CLASS-346-24  
US-PATENT-CLASS-95-89R  
US-PATENT-3,781,902
- N74-16135\* # c 35 ..... NASA-CASE-LAR-10595-1  
US-PATENT-APPL-SN-273240  
US-PATENT-CLASS-340-12R  
US-PATENT-CLASS-340-5R  
US-PATENT-CLASS-340-8R  
US-PATENT-3,783,443
- N74-17153\* # c 35 ..... NASA-CASE-MFS-21087-1  
US-PATENT-APPL-SN-149283  
US-PATENT-CLASS-350-3.5  
US-PATENT-3,752,556
- N74-17283\* # c 27 ..... NASA-CASE-MFS-20486-2  
US-PATENT-APPL-SN-292382  
US-PATENT-APPL-SN-84212  
US-PATENT-CLASS-260-29.6S  
US-PATENT-3,784,499
- N74-17853\* # c 54 ..... NASA-CASE-MFS-21163-1  
US-PATENT-APPL-SN-266925  
US-PATENT-CLASS-222-324  
US-PATENT-CLASS-224-444  
US-PATENT-3,790,037
- N74-17885\* # c 35 ..... NASA-CASE-MSC-13855-1  
US-PATENT-APPL-SN-196931  
US-PATENT-CLASS-325-38B  
US-PATENT-CLASS-332-11D  
US-PATENT-CLASS-340-347AD  
US-PATENT-3,795,900
- N74-17927\* # c 33 ..... NASA-CASE-NPO-13138-1  
US-PATENT-APPL-SN-335201  
US-PATENT-CLASS-328-155  
US-PATENT-CLASS-333-16  
US-PATENT-CLASS-333-18  
US-PATENT-3,790,906
- N74-17928\* # c 33 ..... NASA-CASE-NPO-11966-1  
NASA-CASE-NPO-13159-1  
US-PATENT-APPL-SN-284245  
US-PATENT-CLASS-100-8  
US-PATENT-CLASS-336-210  
US-PATENT-3,792,399
- N74-17929\* # c 33 ..... NASA-CASE-ARC-10197-1  
US-PATENT-APPL-SN-310624  
US-PATENT-CLASS-317-16  
US-PATENT-CLASS-317-31  
US-PATENT-3,795,840
- N74-17930\* # c 33 ..... NASA-CASE-NUC-10107-1  
US-PATENT-APPL-SN-201700  
US-PATENT-CLASS-324-102  
US-PATENT-CLASS-324-110  
US-PATENT-CLASS-329-50  
US-PATENT-3,795,862
- N74-17955\* # c 09 ..... NASA-CASE-LAR-10812-1  
US-PATENT-APPL-SN-263815  
US-PATENT-CLASS-73-147  
US-PATENT-3,791,207
- N74-18088\* # c 35 ..... NASA-CASE-LAR-11027-1  
US-PATENT-APPL-SN-275118  
US-PATENT-CLASS-250-338  
US-PATENT-CLASS-250-370  
US-PATENT-CLASS-250-371  
US-PATENT-3,790,795
- N74-18089\* # c 31 ..... NASA-CASE-LAR-10318-1  
US-PATENT-APPL-SN-224489  
US-PATENT-CLASS-156-245  
US-PATENT-CLASS-156-247  
US-PATENT-CLASS-156-285  
US-PATENT-CLASS-156-309  
US-PATENT-3,793,109
- N74-18090\* # c 35 ..... NASA-CASE-NPO-13160-1  
US-PATENT-APPL-SN-359157  
US-PATENT-CLASS-321-8R  
US-PATENT-CLASS-324-57R  
US-PATENT-3,795,858
- N74-18123\* # c 37 ..... NASA-CASE-LAR-10634-1  
US-PATENT-APPL-SN-214084  
US-PATENT-CLASS-23-253PC  
US-PATENT-CLASS-23-259  
US-PATENT-CLASS-259-72  
US-PATENT-CLASS-312-209  
US-PATENT-CLASS-356-187  
US-PATENT-CLASS-356-85  
US-PATENT-3,790,347
- N74-18124\* # c 31 ..... NASA-CASE-LAR-10489-1  
US-PATENT-APPL-SN-198763  
US-PATENT-CLASS-264-102  
US-PATENT-3,790,650
- N74-18125\* # c 37 ..... NASA-CASE-MFS-21308-1  
US-PATENT-APPL-SN-244519  
US-PATENT-CLASS-180-79.3  
US-PATENT-CLASS-301-5P  
US-PATENT-3,789,947
- N74-18126\* # c 37 ..... NASA-CASE-MFS-21364-1  
US-PATENT-APPL-SN-214006  
US-PATENT-CLASS-156-331  
US-PATENT-CLASS-161-182  
US-PATENT-CLASS-161-192  
US-PATENT-CLASS-161-42  
US-PATENT-CLASS-161-43  
US-PATENT-CLASS-161-83  
US-PATENT-CLASS-260-2R  
US-PATENT-CLASS-264-135  
US-PATENT-CLASS-264-136  
US-PATENT-CLASS-264-257  
US-PATENT-3,790,432
- N74-18127\* # c 37 ..... NASA-CASE-MFS-21481-1  
US-PATENT-APPL-SN-268771  
US-PATENT-CLASS-128-25R  
US-PATENT-CLASS-272-73  
US-PATENT-CLASS-272-80  
US-PATENT-CLASS-74-594.6  
US-PATENT-CLASS-74-594.7  
US-PATENT-3,788,163
- N74-18128\* # c 37 ..... NASA-CASE-LEW-11387-1  
US-PATENT-APPL-SN-247090  
US-PATENT-CLASS-29-482  
US-PATENT-CLASS-29-488  
US-PATENT-CLASS-29-497  
US-PATENT-CLASS-29-498  
US-PATENT-3,787,959
- N74-18323\* # c 35 ..... NASA-CASE-MFS-21136-1  
US-PATENT-APPL-SN-282430  
US-PATENT-CLASS-308-10  
US-PATENT-CLASS-74-5.7  
US-PATENT-3,783,708
- N74-18551\* # c 25 ..... NASA-CASE-LAR-11053-1  
US-PATENT-APPL-SN-281875  
US-PATENT-CLASS-73-15R  
US-PATENT-3,789,654
- N74-18552\* # c 34 ..... NASA-CASE-NPO-11120-1  
US-PATENT-APPL-SN-39343  
US-PATENT-CLASS-165-105  
US-PATENT-CLASS-267-166  
US-PATENT-CLASS-29-157.3R  
US-PATENT-3,789,920
- N74-19310\* # c 72 ..... NASA-CASE-HON-10740-1  
US-PATENT-APPL-SN-266943



		US-PATENT-CLASS-356-106R	N74-20811* #	c 32	NASA-CASE-NPO-13103-1	US-PATENT-CLASS-235-92PE
		US-PATENT-CLASS-356-112			US-PATENT-APPL-SN-338484	US-PATENT-CLASS-235-92SB
		US-PATENT-CLASS-356-228			US-PATENT-CLASS-325-320	US-PATENT-3,800,253
		US-PATENT-3,795,448			US-PATENT-CLASS-325-419	N74-21057* #
N74-19528* #	c 09	NASA-CASE-LAR-10426-1			US-PATENT-CLASS-329-122	c 37
		US-PATENT-APPL-SN-239575			US-PATENT-3,806,815	NASA-CASE-LAR-10941-1
		US-PATENT-CLASS-73-15.6	N74-20813* #	c 32	NASA-CASE-FRC-10071-1	US-PATENT-APPL-SN-289048
		US-PATENT-CLASS-73-91			US-PATENT-3,806,815	US-PATENT-CLASS-29-470.1
		US-PATENT-3,795,134			US-PATENT-APPL-SN-307727	US-PATENT-3,797,098
N74-19692* #	c 44	NASA-CASE-GSC-11367-1			US-PATENT-CLASS-178-7.7	N74-21058* #
		US-PATENT-APPL-SN-236985			US-PATENT-CLASS-315-18	c 37
		US-PATENT-CLASS-136-36			US-PATENT-CLASS-315-22	NASA-CASE-MFS-22411-1
		US-PATENT-3,759,747			US-PATENT-3,803,445	US-PATENT-APPL-SN-382282
N74-19693* #	c 44	NASA-CASE-NPO-11806-1	N74-20836* #	c 60	NASA-CASE-ERC-10180-1	US-PATENT-CLASS-260-448.2N
		US-PATENT-APPL-SN-228163			US-PATENT-APPL-SN-838278	US-PATENT-3,801,617
		US-PATENT-CLASS-136-20			US-PATENT-CLASS-235-164	N74-21059* #
		US-PATENT-CLASS-136-30			US-PATENT-3,803,393	c 31
		US-PATENT-3,790,409			US-PATENT-3,803,393	NASA-CASE-LAR-10409-1
N74-19769* #	c 24	NASA-CASE-ERC-10073-1	N74-20859* #	c 33	NASA-CASE-XLE-2529-3	US-PATENT-CLASS-29-423
		US-PATENT-APPL-SN-856253			US-PATENT-APPL-SN-487929	US-PATENT-3,798,741
		US-PATENT-CLASS-117-95			US-PATENT-APPL-SN-848403	N74-21060* #
		US-PATENT-3,796,592			US-PATENT-CLASS-315-211	c 37
N74-19788* #	c 32	NASA-CASE-NPO-11820-1			US-PATENT-CLASS-315-228	NASA-CASE-NPO-13105-1
		US-PATENT-APPL-SN-266912			US-PATENT-CLASS-331-94.5D	US-PATENT-APPL-SN-283502
		US-PATENT-CLASS-307-237			US-PATENT-CLASS-332-7.51	US-PATENT-CLASS-60-25
		US-PATENT-CLASS-328-160			US-PATENT-3,806,835	US-PATENT-3,798,896
		US-PATENT-CLASS-328-168	N74-20860* #	c 33	NASA-CASE-GSC-11446-1	N74-21061* #
		US-PATENT-CLASS-328-172			US-PATENT-APPL-SN-263230	c 37
		US-PATENT-CLASS-333-14			US-PATENT-CLASS-343-DIG.2	NASA-CASE-LEW-11076-1
		US-PATENT-3,800,237			US-PATENT-CLASS-343-100SA	US-PATENT-APPL-SN-238264
N74-19790* #	c 32	NASA-CASE-MFS-21540-1			US-PATENT-CLASS-343-100ST	US-PATENT-CLASS-308-73
		US-PATENT-APPL-SN-333912			US-PATENT-CLASS-343-854	US-PATENT-3,804,472
		US-PATENT-CLASS-178-7.1			US-PATENT-3,806,932	N74-21062* #
		US-PATENT-CLASS-325-148	N74-20861* #	c 33	NASA-CASE-GSC-11560-1	c 35
		US-PATENT-3,800,224			US-PATENT-APPL-SN-361906	NASA-CASE-LAR-10295-1
N74-19870* #	c 44	NASA-CASE-MFS-21470-1			US-PATENT-CLASS-350-289	US-PATENT-CLASS-73-12
		US-PATENT-APPL-SN-340871			US-PATENT-CLASS-354-234	US-PATENT-CLASS-73-432
		US-PATENT-CLASS-325-62			US-PATENT-CLASS-95-53EA	US-PATENT-3,805,622
		US-PATENT-CLASS-333-17			US-PATENT-3,804,506	N74-21063* #
		US-PATENT-CLASS-343-17.7	N74-20862* #	c 33	NASA-CASE-GSC-11513-1	c 37
		US-PATENT-CLASS-343-7.5			US-PATENT-APPL-SN-315069	NASA-CASE-LEW-11087-1
		US-PATENT-3,795,910			US-PATENT-CLASS-331-108A	US-PATENT-APPL-SN-201904
N74-20008* #	c 74	NASA-CASE-GSC-11188-3			US-PATENT-CLASS-331-115	US-PATENT-APPL-SN-346361
		US-PATENT-APPL-SN-244566			US-PATENT-CLASS-331-116R	US-PATENT-CLASS-308-188
		US-PATENT-APPL-SN-80029			US-PATENT-CLASS-331-159	US-PATENT-CLASS-308-191
		US-PATENT-CLASS-117-45			US-PATENT-3,806,831	US-PATENT-3,802,753
		US-PATENT-3,799,793	N74-20863* #	c 32	NASA-CASE-GSC-11909	N74-21065* #
N74-20009* #	c 36	NASA-CASE-NPO-11861-1			US-PATENT-APPL-SN-244158	c 37
		US-PATENT-APPL-SN-266911			US-PATENT-CLASS-343-730	NASA-CASE-NPO-11951-1
		US-PATENT-CLASS-178-DIG.1			US-PATENT-CLASS-343-786	US-PATENT-APPL-SN-287150
		US-PATENT-CLASS-178-6			US-PATENT-CLASS-343-797	US-PATENT-CLASS-137-628
		US-PATENT-CLASS-178-7.6			US-PATENT-CLASS-343-853	US-PATENT-CLASS-251-120
		US-PATENT-3,800,074			US-PATENT-3,803,617	US-PATENT-CLASS-251-122
N74-20063* #	c 37	NASA-CASE-LAR-10129-2	N74-20864* #	c 32	NASA-CASE-GSC-11428-1	US-PATENT-CLASS-251-210
		US-PATENT-APPL-SN-319410			US-PATENT-APPL-SN-292685	US-PATENT-3,802,660
		US-PATENT-APPL-SN-99201			US-PATENT-CLASS-343-708	N74-21091* #
		US-PATENT-CLASS-312-1			US-PATENT-CLASS-343-769	c 36
		US-PATENT-3,796,473			US-PATENT-CLASS-343-853	NASA-CASE-GSC-11262-1
N74-20329* #	c 76	NASA-CASE-GSC-11425-1			US-PATENT-3,803,617	US-PATENT-APPL-SN-162380
		US-PATENT-APPL-SN-206266	N74-21014* #	c 71	NASA-CASE-HQN-10832-1	US-PATENT-CLASS-250-204
		US-PATENT-CLASS-148-1.5			US-PATENT-APPL-SN-301417	US-PATENT-CLASS-33-285
		US-PATENT-3,799,813			US-PATENT-CLASS-178-DIG.32	US-PATENT-CLASS-356-141
N74-20646* #	c 02	NASA-CASE-LEW-11188-1			US-PATENT-CLASS-178-5.8R	US-PATENT-CLASS-356-152
		US-PATENT-APPL-SN-152328			US-PATENT-CLASS-178-7.2	US-PATENT-CLASS-356-172
		US-PATENT-CLASS-137-15.1			US-PATENT-CLASS-340-407	US-PATENT-3,804,525
		US-PATENT-CLASS-137-15.2			US-PATENT-CLASS-35-35A	N74-21156* #
		US-PATENT-CLASS-244-53B			US-PATENT-3,800,082	c 27
		US-PATENT-3,799,475	N74-21015* #	c 19	NASA-CASE-LAR-10626-1	NASA-CASE-ARC-10592-1
N74-20725* #	c 54	NASA-CASE-MFS-22102-1			US-PATENT-APPL-SN-202750	US-PATENT-APPL-SN-321179
		US-PATENT-APPL-SN-341621			US-PATENT-CLASS-33-1SA	US-PATENT-CLASS-260.46.5E
		US-PATENT-CLASS-4-10			US-PATENT-CLASS-33-46R	US-PATENT-3,803,090
		US-PATENT-CLASS-4-120			US-PATENT-3,798,778	N74-21300* #
		US-PATENT-3,805,303	N74-21017* #	c 35	NASA-CASE-MFS-21660-1	c 70
N74-20726* #	c 52	NASA-CASE-ARC-10597-1			US-PATENT-APPL-SN-310616	NASA-CASE-ARC-10516-1
		US-PATENT-APPL-SN-281876			US-PATENT-CLASS-324-83Q	US-PATENT-APPL-SN-267768
		US-PATENT-CLASS-128-2V			US-PATENT-3,806,802	US-PATENT-CLASS-350-270
		US-PATENT-3,802,253	N74-21018* #	c 35	NASA-CASE-LEW-10981-1	US-PATENT-CLASS-354-234
N74-20728* #	c 52	NASA-CASE-MFS-21415-1			US-PATENT-APPL-SN-214089	US-PATENT-3,797,919
		US-PATENT-APPL-SN-318152			US-PATENT-CLASS-310-11	N74-21304* #
		US-PATENT-CLASS-128-2.07			US-PATENT-CLASS-324-34FL	c 74
		US-PATENT-CLASS-73-23			US-PATENT-CLASS-73-194EM	NASA-CASE-GSC-11353-1
		US-PATENT-CLASS-73-421.5R	N74-21019* #	c 35	US-PATENT-3,802,262	US-PATENT-APPL-SN-260241
		US-PATENT-3,799,149			US-PATENT-APPL-SN-318357	US-PATENT-CLASS-250-231SE
N74-20809* #	c 32	NASA-CASE-MSC-12462-1			US-PATENT-CLASS-73-1F	US-PATENT-CLASS-350-299
		US-PATENT-APPL-SN-274360	N74-21055* #	c 37	US-PATENT-3,802,249	US-PATENT-CLASS-356-152
		US-PATENT-CLASS-178-88			NASA-CASE-LEW-11388-2	US-PATENT-3,802,779
		US-PATENT-CLASS-325-320			US-PATENT-APPL-SN-289033	N74-21850* #
		US-PATENT-CLASS-325-423			US-PATENT-APPL-SN-293726	c 33
		US-PATENT-3,800,227			US-PATENT-CLASS-29-487	NASA-CASE-GSC-11602-1
N74-20810* #	c 32	NASA-CASE-MSC-12494-1			US-PATENT-CLASS-29-498	US-PATENT-APPL-SN-298157
		US-PATENT-APPL-SN-304705			US-PATENT-CLASS-29-504	US-PATENT-CLASS-315-10
		US-PATENT-CLASS-325-321	N74-21056* #	c 37	US-PATENT-3,798,748	US-PATENT-CLASS-315-12
		US-PATENT-CLASS-325-419			NASA-CASE-LAR-10688-1	US-PATENT-3,806,756
		US-PATENT-3,806,816			US-PATENT-APPL-SN-285705	N74-21851* #
					US-PATENT-CLASS-235-151	c 33
						NASA-CASE-ARC-10596-1
						US-PATENT-APPL-SN-267862
						US-PATENT-CLASS-330-28
						US-PATENT-CLASS-330-59
						US-PATENT-3,811,094
						N74-22095* #
						c 35
						NASA-CASE-NPO-10617-1
						US-PATENT-APPL-SN-828920
						US-PATENT-CLASS-73-190H
						US-PATENT-3,648,516
						N74-22096* #
						c 32
						NASA-CASE-XLE-04791
						US-PATENT-APPL-SN-582213
						US-PATENT-CLASS-330-103
						US-PATENT-3,404,348
						N74-22136* #
						c 18
						NASA-CASE-MFS-20922-1
						US-PATENT-APPL-SN-220274
						US-PATENT-CLASS-244-1SS
						US-PATENT-CLASS-49-68
						US-PATENT-CLASS-61-83
						US-PATENT-3,807,656

N74-22771* #	c 52	NASA-CASE-ARC-10447-1 US-PATENT-APPL-SN-311175 US-PATENT-CLASS-128-214E US-PATENT-CLASS-235-151.3 US-PATENT-3,808,871	N74-26654* #	c 32	NASA-CASE-MSC-14065-1 US-PATENT-APPL-SN-297128 US-PATENT-CLASS-178-87 US-PATENT-CLASS-325-30 US-PATENT-3,816,867	N74-27490* #	c 07	NASA-CASE-LEW-11286-1 US-PATENT-APPL-SN-339806 US-PATENT-CLASS-181-33HB US-PATENT-CLASS-239-265.17 US-PATENT-3,820,630
N74-22814* #	c 33	NASA-CASE-NPO-13081-1 US-PATENT-APPL-SN-345372 US-PATENT-CLASS-307-215 US-PATENT-CLASS-307-243 US-PATENT-CLASS-307-290 US-PATENT-CLASS-328-154 US-PATENT-3,808,464	N74-26732* #	c 33	NASA-CASE-MFS-21698-1 US-PATENT-APPL-SN-37050 US-PATENT-CLASS-331-109 US-PATENT-CLASS-331-117R US-PATENT-CLASS-331-183 US-PATENT-3,815,048	N74-27519* #	c 44	NASA-CASE-MFS-20761-1 US-PATENT-APPL-SN-326327 US-PATENT-CLASS-136-182 US-PATENT-CLASS-324-29.5 US-PATENT-CLASS-324-72.5 US-PATENT-3,818,325
N74-22864* #	c 33	NASA-CASE-XER-11046-2 US-PATENT-APPL-SN-810579 US-PATENT-APPL-SN-87597 US-PATENT-CLASS-321-45R US-PATENT-3,808,511	N74-26787* #	c 73	NASA-CASE-NPO-13112-1 US-PATENT-APPL-SN-267572 US-PATENT-CLASS-250-499 US-PATENT-CLASS-313-61S US-PATENT-3,816,785	N74-27566* #	c 52	NASA-CASE-GSC-11531-1 US-PATENT-APPL-SN-291845 US-PATENT-CLASS-128-2.05E US-PATENT-CLASS-73-396AR US-PATENT-3,811,429
N74-22885* #	c 33	NASA-CASE-LAR-10168-1 US-PATENT-APPL-SN-354407 US-PATENT-CLASS-174-DIG.8 US-PATENT-CLASS-174-69 US-PATENT-CLASS-174-70R US-PATENT-CLASS-244-151R US-PATENT-3,809,800	N74-26945* #	c 35	NASA-CASE-MFS-21556-1 US-PATENT-APPL-SN-340791 US-PATENT-CLASS-177-200 US-PATENT-CLASS-177-211 US-PATENT-CLASS-177-246 US-PATENT-CLASS-73-141A US-PATENT-3,812,924	N74-27612* #	c 32	NASA-CASE-MSC-14219-1 US-PATENT-APPL-SN-324029 US-PATENT-CLASS-117-2R US-PATENT-CLASS-156-9A US-PATENT-CLASS-179-100.2A US-PATENT-CLASS-179-100.2B US-PATENT-CLASS-264-36 US-PATENT-3,819,440
N74-22885* #	c 33	NASA-CASE-MFS-21671-1 US-PATENT-APPL-SN-329958 US-PATENT-CLASS-323-106 US-PATENT-CLASS-323-122 US-PATENT-CLASS-323-128 US-PATENT-3,808,517	N74-26946* #	c 35	NASA-CASE-MFS-22040-1 US-PATENT-APPL-SN-385644 US-PATENT-CLASS-350-3.5 US-PATENT-CLASS-96-38.3 US-PATENT-CLASS-96-79 US-PATENT-3,815,969	N74-27682* #	c 33	NASA-CASE-ARC-10593-1 US-PATENT-APPL-SN-310193 US-PATENT-CLASS-250-207 US-PATENT-CLASS-307-252L US-PATENT-CLASS-307-252Q US-PATENT-3,821,546
N74-23039* #	c 34	NASA-CASE-GSC-11820-1 US-PATENT-APPL-SN-280305 US-PATENT-CLASS-126-270 US-PATENT-CLASS-244-127 US-PATENT-CLASS-244-31 US-PATENT-3,807,384	N74-26947* #	c 25	NASA-CASE-ARC-10633-1 US-PATENT-APPL-SN-354611 US-PATENT-CLASS-250-304 US-PATENT-CLASS-250-343 US-PATENT-CLASS-250-373 US-PATENT-3,814,939	N74-27683* #	c 33	NASA-CASE-LEW-10950-1 US-PATENT-APPL-SN-273222 US-PATENT-CLASS-174-111 US-PATENT-CLASS-174-15C US-PATENT-CLASS-174-28 US-PATENT-CLASS-310-4R US-PATENT-3,821,462
N74-23040* #	c 35	NASA-CASE-NPO-11932-1 NASA-CASE-NPO-13127-1 US-PATENT-APPL-SN-311234 US-PATENT-CLASS-356-106S US-PATENT-CLASS-356-113 US-PATENT-3,808,481	N74-26948* #	c 25	NASA-CASE-MFS-21395-1 US-PATENT-APPL-SN-260093 US-PATENT-CLASS-204-180R US-PATENT-3,814,676	N74-27705* #	c 33	NASA-CASE-MSC-14066-1 US-PATENT-APPL-SN-297127 US-PATENT-CLASS-178-88 US-PATENT-CLASS-325-320 US-PATENT-3,816,346
N74-23064* #	c 37	NASA-CASE-LAR-10900-1 US-PATENT-APPL-SN-290021 US-PATENT-CLASS-181-116 US-PATENT-3,809,801	N74-26949* #	c 35	NASA-CASE-GSC-11492-1 US-PATENT-APPL-SN-372148 US-PATENT-CLASS-250-374 US-PATENT-CLASS-250-385 US-PATENT-CLASS-313-93 US-PATENT-3,812,358	N74-27730* #	c 34	NASA-CASE-MFS-21424-1 US-PATENT-APPL-SN-315048 US-PATENT-CLASS-73-147 US-PATENT-CLASS-73-3 US-PATENT-3,817,082
N74-23065* #	c 31	NASA-CASE-NPO-11758-1 US-PATENT-APPL-SN-266913 US-PATENT-CLASS-204-222 US-PATENT-3,810,829	N74-26976* #	c 37	NASA-CASE-MFS-21846-1 US-PATENT-APPL-SN-359958 US-PATENT-CLASS-188-163 US-PATENT-CLASS-188-171 US-PATENT-3,812,936	N74-27744* #	c 34	NASA-CASE-MFS-21394-1 US-PATENT-APPL-SN-258171 US-PATENT-CLASS-204-180R US-PATENT-CLASS-204-299 US-PATENT-3,821,102
N74-23066* #	c 34	NASA-CASE-LAR-10089-1 US-PATENT-APPL-SN-305638 US-PATENT-CLASS-240-47 US-PATENT-CLASS-353-54 US-PATENT-CLASS-353-61 US-PATENT-3,811,044	N74-26977* #	c 33	NASA-CASE-MFS-22133-1 US-PATENT-APPL-SN-337487 US-PATENT-CLASS-29-203MW US-PATENT-3,815,205	N74-27859* #	c 34	NASA-CASE-GSC-11434-1 US-PATENT-APPL-SN-263496 US-PATENT-CLASS-73-190R US-PATENT-3,813,937
N74-23068* #	c 46	NASA-CASE-XNP-10007-1 US-PATENT-APPL-SN-611414 US-PATENT-APPL-SN-788942 US-PATENT-CLASS-299-67 US-PATENT-3,806,470	N74-27035* #	c 24	NASA-CASE-XLA-11028-1 US-PATENT-APPL-SN-219435 US-PATENT-CLASS-156-285 US-PATENT-3,814,853	N74-27860* #	c 35	NASA-CASE-MSC-14081-1 US-PATENT-APPL-SN-331760 US-PATENT-CLASS-250-578 US-PATENT-CLASS-356-180 US-PATENT-CLASS-356-246 US-PATENT-3,817,627
N74-23069* #	c 46	NASA-CASE-XNP-09755 US-PATENT-APPL-SN-611414 US-PATENT-APPL-SN-857241 US-PATENT-CLASS-125-1 US-PATENT-CLASS-125-3 US-PATENT-CLASS-299-86 US-PATENT-CLASS-51-283 US-PATENT-3,812,030	N74-27037* #	c 27	NASA-CASE-ARC-10304-2 US-PATENT-APPL-SN-140946 US-PATENT-APPL-SN-318358 US-PATENT-CLASS-102-105 US-PATENT-CLASS-106-15FP US-PATENT-CLASS-252-82 US-PATENT-CLASS-252-8.1 US-PATENT-CLASS-260-DIG.24 US-PATENT-CLASS-260-2.5FP US-PATENT-CLASS-260-2.5R US-PATENT-CLASS-260-25R US-PATENT-CLASS-260-396N US-PATENT-3,819,550	N74-27861* #	c 34	NASA-CASE-MFS-21108-1 US-PATENT-APPL-SN-307728 US-PATENT-CLASS-136-213 US-PATENT-CLASS-136-230 US-PATENT-CLASS-136-233 US-PATENT-3,819,419
N74-23070* #	c 37	NASA-CASE-MFS-20645-1 US-PATENT-APPL-SN-103091 US-PATENT-CLASS-74-217R US-PATENT-3,878,771	N74-27360* #	c 15	NASA-CASE-LAR-10670-2 US-PATENT-APPL-SN-248761 US-PATENT-APPL-SN-59892 US-PATENT-CLASS-102-90 US-PATENT-CLASS-60-214 US-PATENT-CLASS-60-215 US-PATENT-CLASS-60-39.46 US-PATENT-3,813,875	N74-27862* #	c 33	NASA-CASE-KSC-10731-1 US-PATENT-APPL-SN-288847 US-PATENT-CLASS-324-72 US-PATENT-CLASS-340-151 US-PATENT-CLASS-340-182 US-PATENT-CLASS-340-200 US-PATENT-CLASS-73-170R US-PATENT-3,820,095
N74-23125* #	c 27	NASA-CASE-LEW-10199-1 US-PATENT-APPL-SN-651972 US-PATENT-CLASS-117-126GR US-PATENT-CLASS-117-132B US-PATENT-CLASS-117-161UN US-PATENT-CLASS-260-78TF US-PATENT-3,647,529	N74-27397* #	c 18	NASA-CASE-MFS-21680-1 NASA-CASE-MFS-21681-1 US-PATENT-APPL-SN-343607 US-PATENT-CLASS-244-1SS US-PATENT-CLASS-248-16 US-PATENT-CLASS-248-23 US-PATENT-3,814,350	N74-27864* #	c 52	NASA-CASE-MFS-21049-1 US-PATENT-APPL-SN-304430 US-PATENT-CLASS-128-2S US-PATENT-CLASS-338-114 US-PATENT-CLASS-338-5 US-PATENT-CLASS-73-88.5R US-PATENT-3,820,529
N74-25968* #	c 37	NASA-CASE-MFS-21485-1 US-PATENT-APPL-SN-277436 US-PATENT-CLASS-408-111 US-PATENT-CLASS-408-80 US-PATENT-CLASS-90-12.5 US-PATENT-3,813,183	N74-27425* #	c 28	NASA-CASE-NPO-11743-1 US-PATENT-APPL-SN-277904 US-PATENT-CLASS-102-28EB US-PATENT-CLASS-102-70.2A US-PATENT-CLASS-102-70.2R US-PATENT-3,812,783	N74-27865* #	c 35	NASA-CASE-MFS-21728-1 US-PATENT-APPL-SN-361807 US-PATENT-CLASS-73-141A US-PATENT-3,820,388
N74-26625* #	c 52	NASA-CASE-NPO-13065-1 US-PATENT-APPL-SN-269073 US-PATENT-CLASS-128-2.1A US-PATENT-CLASS-325-113 US-PATENT-CLASS-325-141 US-PATENT-CLASS-340-183 US-PATENT-CLASS-340-203 US-PATENT-CLASS-340-207R US-PATENT-3,815,109				N74-27866* #	c 74	NASA-CASE-MFS-21372-1 US-PATENT-APPL-SN-226477 US-PATENT-CLASS-250-505 US-PATENT-CLASS-250-511 US-PATENT-3,821,556
N74-26626* #	c 52	NASA-CASE-MSC-13999-1				N74-27872* #	c 06	NASA-CASE-ARC-10806 US-PATENT-APPL-SN-478802
						N74-27900* #	c 31	NASA-CASE-LAR-10841-1 US-PATENT-APPL-SN-307729

		US-PATENT-CLASS-13-31			US-PATENT-CLASS-356-141			N74-32921* #	c 37	NASA-CASE-LEW-11076-2
		US-PATENT-CLASS-73-15R			US-PATENT-CLASS-356-147					US-PATENT-APPL-SN-238264
		US-PATENT-3,817,084			US-PATENT-3,827,807					US-PATENT-APPL-SN-346483
N74-27901* #	c 37	NASA-CASE-ARC-10462-1	N74-31148* #	c 71	NASA-CASE-NPO-11623-1					US-PATENT-CLASS-308-121
		US-PATENT-APPL-SN-310615			US-PATENT-APPL-SN-235338			N74-33209* #	c 28	NASA-CASE-NPO-11975-1
		US-PATENT-CLASS-74-675			US-PATENT-CLASS-181-5R					US-PATENT-3,830,552
		US-PATENT-CLASS-74-710			US-PATENT-CLASS-73-69					US-PATENT-APPL-SN-329243
		US-PATENT-3,818,775			US-PATENT-CLASS-73-71.5R					US-PATENT-CLASS-149-17
N74-27902* #	c 31	NASA-CASE-GSC-11445-1			US-PATENT-3,827,288					US-PATENT-CLASS-149-60
		US-PATENT-APPL-SN-248471	N74-31269* #	c 20	NASA-CASE-LEW-11646-1					US-PATENT-CLASS-149-76
		US-PATENT-CLASS-236-49			US-PATENT-APPL-SN-292686			N74-33218* #	c 07	US-PATENT-3,830,673
		US-PATENT-CLASS-98-39			US-PATENT-CLASS-204-182					NASA-CASE-ARC-10712-1
		US-PATENT-3,818,814			US-PATENT-3,826,729					US-PATENT-APPL-SN-344410
N74-27903* #	c 37	NASA-CASE-MS-12549-1	N74-31270* #	c 07	NASA-CASE-LAR-10642-1					US-PATENT-CLASS-181-33HC
		US-PATENT-APPL-SN-301039			US-PATENT-APPL-SN-266820					US-PATENT-CLASS-239-265.11
		US-PATENT-CLASS-244-1SD			US-PATENT-CLASS-137-15.1			N74-33378* #	c 25	US-PATENT-3,830,431
		US-PATENT-3,820,741			US-PATENT-CLASS-415-181					NASA-CASE-MFS-21675-1
N74-27904* #	c 37	NASA-CASE-LEW-11672-1	N74-32418* #	c 07	US-PATENT-3,829,237					US-PATENT-APPL-SN-392823
		US-PATENT-APPL-SN-305639			NASA-CASE-LAR-11141-1					US-PATENT-CLASS-23-277C
		US-PATENT-CLASS-417-52			US-PATENT-APPL-SN-359957					US-PATENT-CLASS-431-202
		US-PATENT-3,819,299			US-PATENT-CLASS-181-33C			N74-33379* #	c 44	US-PATENT-3,833,336
N74-27905* #	c 37	NASA-CASE-LAR-10450-1			US-PATENT-CLASS-181-33F					NASA-CASE-ARC-10461-1
		US-PATENT-APPL-SN-289017			US-PATENT-CLASS-181-33H					US-PATENT-APPL-SN-336319
		US-PATENT-CLASS-51-225			US-PATENT-CLASS-181-33L					US-PATENT-CLASS-60-527
		US-PATENT-CLASS-51-234			US-PATENT-CLASS-181-42					US-PATENT-3,830,060
		US-PATENT-CLASS-51-97R	N74-32546* #	c 54	US-PATENT-3,830,335			N74-34638* #	c 33	NASA-CASE-MFS-22343-1
		US-PATENT-3,820,286			NASA-CASE-MS-11072					US-PATENT-APPL-SN-329237
N74-28097* #	c 35	NASA-CASE-GSC-11479-1			US-PATENT-APPL-SN-689455					US-PATENT-CLASS-307-18
		US-PATENT-APPL-SN-293739			US-PATENT-CLASS-156-218					US-PATENT-CLASS-307-295
		US-PATENT-CLASS-244-1SA			US-PATENT-CLASS-2-2.1A					US-PATENT-CLASS-307-304
		US-PATENT-CLASS-74-5.5			US-PATENT-CLASS-2-82					US-PATENT-CLASS-307-35
		US-PATENT-3,818,767	N74-32598* #	c 32	US-PATENT-3,832,735			N74-34672* #	c 85	US-PATENT-3,840,829
N74-28226* #	c 07	NASA-CASE-LEW-11402-1			NASA-CASE-MS-14070-1					NASA-CASE-LAR-10256-1
		US-PATENT-APPL-SN-219806			US-PATENT-APPL-SN-266940					US-PATENT-APPL-SN-220785
		US-PATENT-CLASS-415-181			US-PATENT-CLASS-340-146.1AQ					US-PATENT-CLASS-104-138R
		US-PATENT-CLASS-416-223			US-PATENT-3,831,142					US-PATENT-CLASS-104-23FS
		US-PATENT-CLASS-416-237	N74-32660* #	c 33	NASA-CASE-GSC-11617-1					US-PATENT-CLASS-238-134
		US-PATENT-3,820,918			US-PATENT-APPL-SN-402865			N74-34857* #	c 35	US-PATENT-3,837,285
N74-29410* #	c 19	NASA-CASE-MFS-21577-1			US-PATENT-CLASS-330-4.9					NASA-CASE-LAR-11428-1
		US-PATENT-APPL-SN-343308			US-PATENT-CLASS-330-53					US-PATENT-APPL-SN-188836
		US-PATENT-CLASS-250-372			US-PATENT-3,833,857					US-PATENT-APPL-SN-357126
		US-PATENT-CLASS-250-394	N74-32711* #	c 33	NASA-CASE-MS-14130-1					US-PATENT-CLASS-250-281
		US-PATENT-3,825,760			US-PATENT-APPL-SN-373587					US-PATENT-CLASS-250-295
N74-29556* #	c 33	NASA-CASE-KSC-10769-1			US-PATENT-CLASS-307-267					US-PATENT-3,835,318
		US-PATENT-APPL-SN-374583			US-PATENT-CLASS-328-58			N75-12086* #	c 25	NASA-CASE-ARC-10469-1
		US-PATENT-CLASS-318-602			US-PATENT-3,831,098					US-PATENT-APPL-SN-281908
		US-PATENT-CLASS-318-603	N74-32712* #	c 33	NASA-CASE-NPO-11948-1					US-PATENT-CLASS-195-103.5R
		US-PATENT-CLASS-318-664			US-PATENT-APPL-SN-306652					US-PATENT-3,846,243
		US-PATENT-3,826,964			US-PATENT-CLASS-307-230			N75-12087* #	c 25	NASA-CASE-ARC-10643-1
N74-30001* #	c 24	NASA-CASE-LAR-10416-1			US-PATENT-CLASS-330-69					US-PATENT-APPL-SN-513389
		US-PATENT-APPL-SN-251752			US-PATENT-CLASS-333-80R					US-PATENT-CLASS-117-161UA
		US-PATENT-CLASS-156-94			US-PATENT-3,831,117					US-PATENT-CLASS-117-161UN
		US-PATENT-3,814,645	N74-32877* #	c 35	NASA-CASE-LAR-10806-1					US-PATENT-CLASS-117-161UZ
N74-30156* #	c 75	NASA-CASE-ARC-10598-1			US-PATENT-APPL-SN-322998					US-PATENT-CLASS-117-93.1GD
		US-PATENT-APPL-SN-318151			US-PATENT-CLASS-33-1M					US-PATENT-CLASS-204-177
		US-PATENT-CLASS-356-201			US-PATENT-CLASS-33-23R					US-PATENT-CLASS-210-500
		US-PATENT-CLASS-356-43			US-PATENT-CLASS-338-89					US-PATENT-CLASS-264-217
		US-PATENT-CLASS-356-73			US-PATENT-CLASS-340-347AD					US-PATENT-CLASS-264-22
		US-PATENT-CLASS-356-85			US-PATENT-CLASS-346-33R					US-PATENT-3,847,652
		US-PATENT-CLASS-356-87			US-PATENT-3,832,781			N75-12161* #	c 31	NASA-CASE-MFS-20775-1
		US-PATENT-3,817,622	N74-32878* #	c 35	NASA-CASE-LAR-11139-1					US-PATENT-APPL-SN-356664
N74-30421* #	c 08	NASA-CASE-LAR-10753-1			US-PATENT-APPL-SN-287149					US-PATENT-CLASS-118-49.1
		US-PATENT-APPL-SN-289018			US-PATENT-CLASS-73-182					US-PATENT-3,847,115
		US-PATENT-CLASS-244-327			US-PATENT-CLASS-73-388			N75-12222* #	c 34	NASA-CASE-GSC-11619-1
		US-PATENT-CLASS-244-90R			US-PATENT-CLASS-73-388					US-PATENT-APPL-SN-397476
		US-PATENT-CLASS-244-91			US-PATENT-3,832,903					US-PATENT-CLASS-138-113
		US-PATENT-3,826,448	N74-32879* #	c 35	NASA-CASE-MS-14187-1					US-PATENT-CLASS-138-114
N74-30502* #	c 25	NASA-CASE-LEW-10906-1			US-PATENT-APPL-SN-326326					US-PATENT-CLASS-138-148
		US-PATENT-APPL-SN-245279			US-PATENT-CLASS-23-230L					US-PATENT-CLASS-165-1
		US-PATENT-APPL-SN-876588			US-PATENT-CLASS-73-104					US-PATENT-CLASS-165-105
		US-PATENT-CLASS-204-157.1H			US-PATENT-CLASS-73-15.4					US-PATENT-CLASS-165-47
		US-PATENT-3,826,726			US-PATENT-CLASS-73-40.7					US-PATENT-CLASS-220-15
N74-30523* #	c 32	NASA-CASE-NPO-11921-1	N74-32917* #	c 31	US-PATENT-3,830,094					US-PATENT-CLASS-244-1SC
		US-PATENT-APPL-SN-359039			NASA-CASE-NPO-13205-1			N75-12270* #	c 35	US-PATENT-3,847,208
		US-PATENT-CLASS-179-15BC			US-PATENT-APPL-SN-393525					NASA-CASE-KSC-10750-1
		US-PATENT-CLASS-325-346			US-PATENT-CLASS-425-28B					US-PATENT-APPL-SN-346372
		US-PATENT-3,828,138			US-PATENT-CLASS-425-35					US-PATENT-CLASS-324-158T
N74-30524* #	c 32	NASA-CASE-MS-13912-1			US-PATENT-3,833,322					US-PATENT-CLASS-324-60C
		US-PATENT-APPL-SN-310034	N74-32918* #	c 37	NASA-CASE-NPO-13157-1					US-PATENT-3,848,190
		US-PATENT-CLASS-179-15AT			US-PATENT-APPL-SN-370872			N75-12271* #	c 35	NASA-CASE-MFS-20994-1
		US-PATENT-CLASS-179-15BY			US-PATENT-CLASS-29-203H					US-PATENT-APPL-SN-386789
		US-PATENT-3,828,137			US-PATENT-CLASS-29-268					US-PATENT-CLASS-128-2V
N74-30597* #	c 09	NASA-CASE-LAR-10550-1			US-PATENT-3,832,764					US-PATENT-CLASS-73-67.1
		US-PATENT-APPL-SN-261183	N74-32919* #	c 20	NASA-CASE-LEW-11118-1					US-PATENT-3,847,141
		US-PATENT-CLASS-35-12E			US-PATENT-APPL-SN-289050			N75-12272* #	c 35	NASA-CASE-LAR-11069-1
		US-PATENT-3,824,707			US-PATENT-CLASS-204-9					US-PATENT-APPL-SN-326198
N74-30608* #	c 34	NASA-CASE-LAR-10194-1			US-PATENT-3,832,290					US-PATENT-CLASS-195-127
		US-PATENT-APPL-SN-169962	N74-32920* #	c 31	NASA-CASE-LAR-10489-2					US-PATENT-3,841,973
		US-PATENT-CLASS-55-159			US-PATENT-APPL-SN-198763			N75-12273* #	c 35	NASA-CASE-MFS-20506-1
		US-PATENT-CLASS-55-199			US-PATENT-APPL-SN-350300					US-PATENT-APPL-SN-328792
		US-PATENT-CLASS-55-43			US-PATENT-CLASS-249-145					US-PATENT-CLASS-33-DIG.13
		US-PATENT-3,828,524			US-PATENT-CLASS-249-184					US-PATENT-CLASS-33-180R
N74-30886* #	c 89	NASA-CASE-GSC-11569-1			US-PATENT-CLASS-249-83					US-PATENT-CLASS-350-292
		US-PATENT-APPL-SN-293725			US-PATENT-CLASS-249-95					US-PATENT-3,842,509
		US-PATENT-CLASS-250-203R			US-PATENT-CLASS-425-128			N75-12326* #	c 37	NASA-CASE-LAR-11211-1
		US-PATENT-CLASS-33-268			US-PATENT-CLASS-425-415					US-PATENT-APPL-SN-302681
					US-PATENT-3,830,609					

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		US-PATENT-CLASS-329-166	N75-19686* #	c 37	NASA-CASE-MFS-19193-1	US-PATENT-APPL-SN-374422		
		US-PATENT-CLASS-329-204			US-PATENT-APPL-SN-461477	US-PATENT-CLASS-343-100PE		
		US-PATENT-CLASS-332-47			US-PATENT-CLASS-285-114	US-PATENT-CLASS-343-5GC		
		US-PATENT-3,869,676			US-PATENT-CLASS-285-226	US-PATENT-3,883,872		
N75-19521* #	c 33	NASA-CASE-KSC-10736-1	N75-20139* #	c 77	US-PATENT-3,869,151	N75-25040* #	c 33	NASA-CASE-GSC-11623-1
		US-PATENT-APPL-SN-348787			NASA-CASE-MSC-14143-1			US-PATENT-APPL-SN-389929
		US-PATENT-CLASS-324-102			US-PATENT-APPL-SN-393526			US-PATENT-CLASS-331-1A
		US-PATENT-CLASS-324-110			US-PATENT-CLASS-165-110			US-PATENT-CLASS-331-18
		US-PATENT-3,869,667			US-PATENT-CLASS-165-111			US-PATENT-CLASS-331-25
N75-19522* #	c 33	NASA-CASE-GSC-11844-1			US-PATENT-CLASS-62-285			US-PATENT-3,883,817
		US-PATENT-APPL-SN-452761			US-PATENT-CLASS-62-288	N75-25041* #	c 33	NASA-CASE-ARC-10364-2
		US-PATENT-CLASS-307-227			US-PATENT-CLASS-62-289			US-PATENT-APPL-SN-209618
		US-PATENT-CLASS-321-15			US-PATENT-CLASS-62-290			US-PATENT-APPL-SN-433968
		US-PATENT-CLASS-324-32			US-PATENT-CLASS-62-317			US-PATENT-CLASS-307-321
		US-PATENT-3,869,659			US-PATENT-CLASS-62-93			US-PATENT-CLASS-324-DIG.1
N75-19524* #	c 33	NASA-CASE-NPO-13374-1	N75-20140* #	c 77	US-PATENT-3,868,830			US-PATENT-CLASS-329-166
		US-PATENT-APPL-SN-449118			NASA-CASE-GSC-11752-1			US-PATENT-CLASS-329-204
		US-PATENT-CLASS-318-137			US-PATENT-APPL-SN-446569			US-PATENT-3,883,812
		US-PATENT-CLASS-318-167			US-PATENT-CLASS-219-497	N75-25122* #	c 35	NASA-CASE-NPO-10764-2
		US-PATENT-CLASS-318-176			US-PATENT-CLASS-219-501			US-PATENT-APPL-SN-273519
		US-PATENT-CLASS-318-183			US-PATENT-CLASS-219-505			US-PATENT-APPL-SN-836280
		US-PATENT-3,867,677			US-PATENT-3,869,597			US-PATENT-CLASS-116-114.5
N75-19611* #	c 35	NASA-CASE-LAR-11071-1	N75-21485* #	c 32	NASA-CASE-MSC-12607-1			US-PATENT-CLASS-117-72
		US-PATENT-APPL-SN-334349			US-PATENT-APPL-SN-407323			US-PATENT-CLASS-73-356
		US-PATENT-CLASS-417-138			US-PATENT-CLASS-178-DIG.12			US-PATENT-3,874,240
		US-PATENT-CLASS-417-36			US-PATENT-CLASS-358-36	N75-25123* #	c 35	NASA-CASE-NPO-13214-1
		US-PATENT-CLASS-417-395			US-PATENT-3,875,584			NASA-CASE-NPO-13215-1
		US-PATENT-CLASS-73-221	N75-21486* #	c 32	NASA-CASE-MSC-14558-1			US-PATENT-APPL-SN-394149
		US-PATENT-3,864,060			US-PATENT-APPL-SN-428994			US-PATENT-CLASS-178-DIG.29
N75-19612* #	c 35	NASA-CASE-LAR-11237-1			US-PATENT-CLASS-178-58A			US-PATENT-CLASS-178-7.2
		US-PATENT-APPL-SN-402868			US-PATENT-CLASS-178-79			US-PATENT-3,883,689
		US-PATENT-CLASS-340-242			US-PATENT-3,875,332	N75-25124* #	c 35	NASA-CASE-MFS-21704-1
		US-PATENT-CLASS-73-46	N75-21582* #	c 35	NASA-CASE-MFS-22671-1			US-PATENT-APPL-SN-386793
		US-PATENT-CLASS-73-49.2			US-PATENT-APPL-SN-419831			US-PATENT-CLASS-350-3.5
		US-PATENT-3,864,960			US-PATENT-CLASS-178-69A			US-PATENT-3,883,215
N75-19613* #	c 35	NASA-CASE-LAR-11207-1			US-PATENT-CLASS-235-181	N75-25185* #	c 37	NASA-CASE-NPO-13360-1
		US-PATENT-APPL-SN-385013			US-PATENT-CLASS-324-57PS			US-PATENT-APPL-SN-401920
		US-PATENT-CLASS-178-DIG.20			US-PATENT-CLASS-324-77H			US-PATENT-CLASS-228-1
		US-PATENT-CLASS-250-332			US-PATENT-CLASS-325-67			US-PATENT-CLASS-251-333
		US-PATENT-CLASS-356-186			US-PATENT-3,875,500			US-PATENT-3,874,635
		US-PATENT-CLASS-356-189	N75-21631* #	c 37	NASA-CASE-LEW-11274-1	N75-25186* #	c 37	NASA-CASE-MFS-22649-1
		US-PATENT-CLASS-356-83			US-PATENT-APPL-SN-380630			US-PATENT-APPL-SN-398901
		US-PATENT-CLASS-356-96			US-PATENT-CLASS-277-134			US-PATENT-CLASS-408-112
		US-PATENT-3,869,212			US-PATENT-CLASS-277-27			US-PATENT-CLASS-408-186
N75-19614* #	c 35	NASA-CASE-LAR-11173-1			US-PATENT-CLASS-277-40			US-PATENT-CLASS-408-193
		US-PATENT-APPL-SN-354408			US-PATENT-3,874,677			US-PATENT-CLASS-408-195
		US-PATENT-CLASS-332-2	N75-23910* #	c 35	NASA-CASE-NPO-13327-1			US-PATENT-3,877,833
		US-PATENT-CLASS-73-557			US-PATENT-APPL-SN-429437	N75-25503* #	c 51	NASA-CASE-ARC-10722-1
		US-PATENT-3,868,856			US-PATENT-CLASS-247-171			US-PATENT-APPL-SN-428995
N75-19615* #	c 35	NASA-CASE-MFS-22189-1			US-PATENT-CLASS-250-203			US-PATENT-CLASS-47-1.2
		US-PATENT-APPL-SN-405342			US-PATENT-CLASS-250-211R			US-PATENT-CLASS-47-39
		US-PATENT-CLASS-33-148D			US-PATENT-3,875,404			US-PATENT-CLASS-47-58
		US-PATENT-CLASS-73-143	N75-24716* #	c 05	NASA-CASE-MSC-14339-1			US-PATENT-3,882,634
		US-PATENT-3,864,953			US-PATENT-APPL-SN-347953	N75-25706* #	c 74	NASA-CASE-HQN-10542-1
N75-19616* #	c 35	NASA-CASE-MFS-20932-1			US-PATENT-CLASS-128-2.06E			US-PATENT-APPL-SN-163151
		US-PATENT-APPL-SN-374441			US-PATENT-CLASS-128-DIG.4			US-PATENT-CLASS-178-DIG.25
		US-PATENT-CLASS-250-505			US-PATENT-CLASS-128-2.06B			US-PATENT-CLASS-250-566
		US-PATENT-CLASS-250-508			US-PATENT-3,882,846			US-PATENT-CLASS-350-311
		US-PATENT-CLASS-250-510	N75-24736* #	c 07	NASA-CASE-ARC-10754-1			US-PATENT-3,883,436
		US-PATENT-3,869,615			US-PATENT-APPL-SN-398886	N75-25730* #	c 76	NASA-CASE-GSC-11425-2
N75-19652* #	c 36	NASA-CASE-NPO-13131-1			US-PATENT-CLASS-137-15.1			US-PATENT-APPL-SN-206266
		US-PATENT-APPL-SN-390468			US-PATENT-CLASS-244-53B			US-PATENT-APPL-SN-394206
		US-PATENT-CLASS-178-7.1			US-PATENT-3,883,095			US-PATENT-CLASS-357-23
		US-PATENT-CLASS-250-211R	N75-24758* #	c 09	NASA-CASE-GSC-11127-1			US-PATENT-CLASS-357-29
		US-PATENT-CLASS-250-578			US-PATENT-APPL-SN-401466			US-PATENT-CLASS-357-42
		US-PATENT-CLASS-315-169R			US-PATENT-CLASS-318-314			US-PATENT-CLASS-357-52
		US-PATENT-CLASS-340-173LS			US-PATENT-CLASS-318-318			US-PATENT-CLASS-357-54
		US-PATENT-3,865,975			US-PATENT-CLASS-318-341			US-PATENT-CLASS-357-91
N75-19653* #	c 36	NASA-CASE-HQN-10844-1			US-PATENT-3,883,785			US-PATENT-3,882,530
		US-PATENT-APPL-SN-412080	N75-24774* #	c 12	NASA-CASE-NPO-13263-1	N75-25914* #	c 05	NASA-CASE-LAR-11252-1
		US-PATENT-CLASS-356-106LR			US-PATENT-APPL-SN-393523			US-PATENT-APPL-SN-367268
		US-PATENT-3,869,210			US-PATENT-CLASS-73-505			US-PATENT-CLASS-D12-76
N75-19654* #	c 36	NASA-CASE-GSC-11746-1			US-PATENT-CLASS-73-505			US-PATENT-CLASS-244-13
		US-PATENT-APPL-SN-393528			US-PATENT-3,882,732			US-PATENT-CLASS-244-15
		US-PATENT-CLASS-331-94.5M	N75-24794* #	c 14	NASA-CASE-MFS-21488-1			US-PATENT-CLASS-244-42DA
		US-PATENT-3,869,680			US-PATENT-APPL-SN-359156			US-PATENT-CLASS-244-55
N75-19655* #	c 36	NASA-CASE-LAR-11341-1			US-PATENT-CLASS-73-143			US-PATENT-CLASS-244-55
		US-PATENT-APPL-SN-367293			US-PATENT-3,882,719			US-PATENT-3,884,432
		US-PATENT-CLASS-330-4.3	N75-24837* #	c 20	NASA-CASE-NPO-13303-1	N75-25915* #	c 05	NASA-CASE-ARC-10519-2
		US-PATENT-CLASS-331-94.5P			US-PATENT-APPL-SN-457295			US-PATENT-APPL-SN-452767
		US-PATENT-3,868,591			US-PATENT-CLASS-310-10			US-PATENT-CLASS-280-150SB
N75-19683* #	c 37	NASA-CASE-MSC-19095-1			US-PATENT-CLASS-310-4			US-PATENT-CLASS-297-385
		US-PATENT-APPL-SN-415486			US-PATENT-CLASS-310-40			US-PATENT-CLASS-297-388
		US-PATENT-CLASS-219-137			US-PATENT-CLASS-310-52			US-PATENT-CLASS-297-389
		US-PATENT-3,864,542			US-PATENT-CLASS-335-216			US-PATENT-3,887,233
N75-19684* #	c 37	NASA-CASE-NPO-13345-1			US-PATENT-CLASS-60-516	N75-26043* #	c 25	NASA-CASE-LAR-11144-1
		US-PATENT-APPL-SN-462705			US-PATENT-CLASS-60-530			US-PATENT-APPL-SN-426405
		US-PATENT-CLASS-204-192			US-PATENT-CLASS-62-3			US-PATENT-CLASS-117-106A
		US-PATENT-CLASS-204-298			US-PATENT-CLASS-62-467			US-PATENT-CLASS-117-107.2
		US-PATENT-3,864,239			US-PATENT-3,875,435			US-PATENT-CLASS-117-201
N75-19685* #	c 37	NASA-CASE-MFS-21606-1	N75-24981* #	c 32	NASA-CASE-GSC-11743-1			US-PATENT-CLASS-118-48
		US-PATENT-APPL-SN-356555			US-PATENT-APPL-SN-370271			US-PATENT-CLASS-118-49.1
		US-PATENT-CLASS-292-DIG.14			US-PATENT-CLASS-178-66R			US-PATENT-CLASS-148-175
		US-PATENT-CLASS-292-108			US-PATENT-CLASS-325-30			US-PATENT-CLASS-252-62.3GA
		US-PATENT-CLASS-292-122			US-PATENT-CLASS-325-60			US-PATENT-3,888,705
		US-PATENT-3,869,160	N75-24982* #	c 32	US-PATENT-3,878,464	N75-26194* #	c 32	NASA-CASE-NPO-13217-1
					NASA-CASE-NPO-13140-1			US-PATENT-APPL-SN-362145

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N75-30876* #	c 73	NASA-CASE-LEW-11227-1 US-PATENT-APPL-SN-146939 US-PATENT-CLASS-244-1SS US-PATENT-CLASS-250-493 US-PATENT-CLASS-250-496 US-PATENT-3,899,680	US-PATENT-CLASS-195-103.5R US-PATENT-3,907,646	US-PATENT-CLASS-343-846 US-PATENT-3,919,710
N75-31329* #	c 33	NASA-CASE-NPO-13423-1 US-PATENT-APPL-SN-470429 US-PATENT-CLASS-128-2S US-PATENT-CLASS-338-2 US-PATENT-CLASS-73-88.5 US-PATENT-3,905,356	N75-33369* # c 35 NASA-CASE-LAR-11263-1 US-PATENT-APPL-SN-472775 US-PATENT-CLASS-73-141A US-PATENT-3,906,788	N76-14373* # c 33 NASA-CASE-NPO-13451-1 US-PATENT-APPL-SN-501012 US-PATENT-CLASS-235-92SH US-PATENT-CLASS-307-221R US-PATENT-CLASS-328-37 US-PATENT-3,911,330
N75-31330* #	c 33	NASA-CASE-NPO-13426-1 US-PATENT-APPL-SN-45053 US-PATENT-CLASS-307-225R US-PATENT-CLASS-328-41 US-PATENT-3,906,374	N75-33395* # c 37 NASA-CASE-MFS-22283-1 US-PATENT-APPL-SN-387095 US-PATENT-CLASS-279-1B US-PATENT-CLASS-279-107 US-PATENT-CLASS-279-89 US-PATENT-CLASS-29-26A US-PATENT-CLASS-294-116 US-PATENT-CLASS-294-86.33 US-PATENT-3,907,312	N76-14429* # c 35 NASA-CASE-LAR-11552-1 US-PATENT-APPL-SN-518685 US-PATENT-CLASS-73-182 US-PATENT-CLASS-73-212 US-PATENT-3,914,997
N75-31331* #	c 33	NASA-CASE-NPO-11156-2 US-PATENT-APPL-SN-174684 US-PATENT-CLASS-307-238 US-PATENT-CLASS-340-173CA US-PATENT-CLASS-357-24 US-PATENT-CLASS-357-7 US-PATENT-3,906,296	N75-33640* # c 52 NASA-CASE-LEW-12051-1 US-PATENT-APPL-SN-397478 US-PATENT-CLASS-128-230 US-PATENT-CLASS-128-305 US-PATENT-3,906,954	N76-14430* # c 35 NASA-CASE-NPO-13170-1 US-PATENT-APPL-SN-382261 US-PATENT-CLASS-338-6 US-PATENT-CLASS-73-88.5R US-PATENT-3,914,991
N75-31332* #	c 33	NASA-CASE-NPO-13348-1 US-PATENT-APPL-SN-452770 US-PATENT-CLASS-250-238 US-PATENT-CLASS-250-370 US-PATENT-CLASS-357-5 US-PATENT-3,906,231	N76-14158* # c 15 NASA-CASE-LAR-11051-1 US-PATENT-APPL-SN-384773 US-PATENT-CLASS-244-165 US-PATENT-CLASS-244-3.21 US-PATENT-CLASS-74-5.17 US-PATENT-3,915,416	N76-14431* # c 35 NASA-CASE-LEW-11915-1 US-PATENT-APPL-SN-474744 US-PATENT-CLASS-137-15.2 US-PATENT-CLASS-235-151.34 US-PATENT-CLASS-60-39.29 US-PATENT-3,911,260
N75-31426* #	c 36	NASA-CASE-ARC-10370-1 US-PATENT-APPL-SN-137391 US-PATENT-CLASS-331-94.5G US-PATENT-CLASS-331-94.5P US-PATENT-3,906,397	N76-14186* # c 18 NASA-CASE-MSC-12559-1 US-PATENT-APPL-SN-370582 US-PATENT-CLASS-178-DIG.20 US-PATENT-CLASS-244-161 US-PATENT-CLASS-33-286 US-PATENT-CLASS-35-12 US-PATENT-CLASS-356-153 US-PATENT-3,910,533	N76-14447* # c 36 NASA-CASE-ARC-10642-1 US-PATENT-APPL-SN-446562 US-PATENT-CLASS-356-106R US-PATENT-CLASS-356-28 US-PATENT-3,915,572
N75-31427* #	c 36	NASA-CASE-NPO-13175-1 US-PATENT-APPL-SN-374423 US-PATENT-CLASS-331-94.5C US-PATENT-CLASS-350-161 US-PATENT-CLASS-350-96WG US-PATENT-3,906,393	N76-14190* # c 20 NASA-CASE-LEW-11593-1 US-PATENT-APPL-SN-363691 US-PATENT-CLASS-60-39.23 US-PATENT-CLASS-60-39.29 US-PATENT-CLASS-60-39.74R US-PATENT-3,910,035	N76-14460* # c 37 NASA-CASE-MFS-19194-1 US-PATENT-APPL-SN-483850 US-PATENT-CLASS-285-226 US-PATENT-CLASS-285-265 US-PATENT-3,915,482
N75-31446* #	c 37	NASA-CASE-LEW-11925-1 US-PATENT-APPL-SN-450505 US-PATENT-CLASS-308-191 US-PATENT-CLASS-308-195 US-PATENT-CLASS-308-201 US-PATENT-3,905,660	N76-14191* # c 20 NASA-CASE-LEW-11118-2 US-PATENT-APPL-SN-436316 US-PATENT-CLASS-239-127.3 US-PATENT-CLASS-60-265 US-PATENT-CLASS-60-267 US-PATENT-3,910,039	N76-14461* # c 37 NASA-CASE-LEW-11694-2 US-PATENT-APPL-SN-352381 US-PATENT-APPL-SN-462903 US-PATENT-CLASS-29-421 US-PATENT-CLASS-72-363 US-PATENT-CLASS-72-54 US-PATENT-CLASS-72-63 US-PATENT-3,914,969
N75-32441* #	c 36	NASA-CASE-NPO-13449-1 US-PATENT-APPL-SN-420813 US-PATENT-CLASS-310-11 US-PATENT-CLASS-330-4.3 US-PATENT-CLASS-331-94.5PE US-PATENT-CLASS-331-94.5G US-PATENT-3,906,398	N76-14203* # c 24 NASA-CASE-NPO-12122-1 US-PATENT-APPL-SN-401921 US-PATENT-CLASS-149-36 US-PATENT-CLASS-423-407 US-PATENT-3,919,014	N76-14463* # c 37 NASA-CASE-MFS-22323-1 US-PATENT-APPL-SN-474745 US-PATENT-CLASS-137-515.3 US-PATENT-CLASS-137-550 US-PATENT-CLASS-210-429 US-PATENT-CLASS-251-149.6 US-PATENT-3,910,307
N75-32465* #	c 37	NASA-CASE-ARC-10907-1 US-PATENT-APPL-SN-619986	N76-14204* # c 24 NASA-CASE-MSC-12568-1 US-PATENT-APPL-SN-325784 US-PATENT-CLASS-136-148 US-PATENT-CLASS-136-148 US-PATENT-CLASS-162-102 US-PATENT-CLASS-162-153 US-PATENT-CLASS-162-222 US-PATENT-CLASS-162-228 US-PATENT-3,910,814	N76-14595* # c 44 NASA-CASE-MFS-22562-1 US-PATENT-APPL-SN-458484 US-PATENT-CLASS-126-270 US-PATENT-CLASS-136-206 US-PATENT-CLASS-204-32R US-PATENT-CLASS-204-33 US-PATENT-CLASS-204-38A US-PATENT-CLASS-204-40 US-PATENT-CLASS-204-42 US-PATENT-CLASS-204-49 US-PATENT-CLASS-29-194 US-PATENT-CLASS-29-195 US-PATENT-CLASS-29-197 US-PATENT-3,920,413
N75-32581* #	c 44	NASA-CASE-MFS-21628-1 US-PATENT-APPL-SN-421702 US-PATENT-CLASS-126-271 US-PATENT-CLASS-165-105 US-PATENT-CLASS-244-173 US-PATENT-CLASS-60-641 US-PATENT-CLASS-60-659 US-PATENT-3,903,699	N76-14264* # c 27 NASA-CASE-MSC-14182-1 US-PATENT-APPL-SN-419748 US-PATENT-CLASS-403-178 US-PATENT-CLASS-403-179 US-PATENT-CLASS-428-109 US-PATENT-CLASS-428-212 US-PATENT-CLASS-428-214 US-PATENT-CLASS-428-416 US-PATENT-CLASS-428-447 US-PATENT-CLASS-428-77 US-PATENT-3,920,339	N76-14600* # c 44 NASA-CASE-LEW-11065-2 US-PATENT-APPL-SN-154930 US-PATENT-APPL-SN-371322 US-PATENT-CLASS-136-89 US-PATENT-CLASS-29-572 US-PATENT-3,912,540
N75-33181* #	c 24	NASA-CASE-LEW-11484-1 US-PATENT-APPL-SN-356554 US-PATENT-CLASS-117-105.2 US-PATENT-CLASS-117-38 US-PATENT-CLASS-117-46FS US-PATENT-CLASS-117-8.5 US-PATENT-CLASS-29-DIG.24 US-PATENT-CLASS-29-DIG.39 US-PATENT-CLASS-29-527.2 US-PATENT-CLASS-72-46 US-PATENT-3,906,769	N76-14284* # c 31 NASA-CASE-NPO-13435-1 US-PATENT-APPL-SN-478803 US-PATENT-CLASS-62-129 US-PATENT-CLASS-62-49 US-PATENT-CLASS-73-295 US-PATENT-3,914,950	N76-14601* # c 44 NASA-CASE-MFS-22749-1 US-PATENT-APPL-SN-483857 US-PATENT-CLASS-136-114 US-PATENT-CLASS-136-162 US-PATENT-CLASS-136-182 US-PATENT-CLASS-136-90 US-PATENT-3,912,541
N75-33342* #	c 34	NASA-CASE-MSC-14273-1 US-PATENT-APPL-SN-385522 US-PATENT-CLASS-210-234 US-PATENT-CLASS-210-259 US-PATENT-CLASS-210-304 US-PATENT-CLASS-210-333 US-PATENT-CLASS-210-340 US-PATENT-CLASS-210-411 US-PATENT-CLASS-210-425 US-PATENT-CLASS-210-512 US-PATENT-CLASS-210-82 US-PATENT-3,907,686	N76-14321* # c 32 NASA-CASE-LAR-11021-1 US-PATENT-APPL-SN-453115 US-PATENT-CLASS-325-304 US-PATENT-CLASS-325-306 US-PATENT-CLASS-325-372 US-PATENT-CLASS-328-145 US-PATENT-CLASS-343-176 US-PATENT-3,916,316	N76-14802* # c 44 NASA-CASE-NPO-13497-1 US-PATENT-APPL-SN-526448 US-PATENT-CLASS-126-271 US-PATENT-CLASS-237-1A US-PATENT-CLASS-350-211 US-PATENT-3,915,148
N75-33367* #	c 35	NASA-CASE-LAR-10629-1 US-PATENT-APPL-SN-402867 US-PATENT-CLASS-116-114AH US-PATENT-CLASS-73-12 US-PATENT-CLASS-73-170R US-PATENT-CLASS-73-432PS US-PATENT-3,896,758	N76-14371* # c 33 NASA-CASE-KSC-10834-1 US-PATENT-APPL-SN-536535 US-PATENT-CLASS-178-68.5R US-PATENT-CLASS-178-88 US-PATENT-CLASS-328-190 US-PATENT-CLASS-328-63 US-PATENT-3,916,084	N76-14757* # c 52 NASA-CASE-MSC-14180-1 US-PATENT-APPL-SN-354406 US-PATENT-CLASS-128-2.06R US-PATENT-CLASS-128-2.1A US-PATENT-CLASS-128-2H US-PATENT-3,910,257
N75-33368* #	c 35	NASA-CASE-LAR-11326-1 US-PATENT-APPL-SN-491416	N76-14804* # c 54 NASA-CASE-MSC-14640-1 US-PATENT-APPL-SN-526449 US-PATENT-CLASS-128-2F US-PATENT-CLASS-73-421R US-PATENT-3,915,012	N76-14818* # c 60 NASA-CASE-NPO-13422-1 US-PATENT-APPL-SN-521601 US-PATENT-CLASS-340-147C

		US-PATENT-CLASS-340-147R			US-PATENT-APPL-SN-445178			US-PATENT-CLASS-136-202
		US-PATENT-3,916,380			US-PATENT-CLASS-308-122			US-PATENT-CLASS-136-210
N76-14931* #	c 75	NASA-CASE-MFS-22287-1			US-PATENT-CLASS-308-160			US-PATENT-CLASS-165-105
		US-PATENT-APPL-SN-438147			US-PATENT-CLASS-308-72			US-PATENT-CLASS-310-4
		US-PATENT-CLASS-315-111.6			US-PATENT-CLASS-308-73			US-PATENT-3,931,532
		US-PATENT-CLASS-73-12			US-PATENT-CLASS-308-9	N76-17185* #	c 18	NASA-CASE-MSC-12561-1
		US-PATENT-CLASS-89-8			US-PATENT-3,928,482			US-PATENT-APPL-SN-448323
N76-15189* #	c 12	US-PATENT-3,916,761	N76-15880* #	c 72	NASA-CASE-LEW-11866-1			US-PATENT-CLASS-244-182
		NASA-CASE-MSC-12611-1			US-PATENT-APPL-SN-500980			US-PATENT-CLASS-244-172
		US-PATENT-APPL-SN-446580			US-PATENT-CLASS-250-489	N76-17317* #	c 34	US-PATENT-3,929,306
		US-PATENT-CLASS-350-288			US-PATENT-CLASS-250-500			NASA-CASE-LAR-10799-2
		US-PATENT-CLASS-350-293			US-PATENT-3,924,137			US-PATENT-APPL-SN-301419
		US-PATENT-CLASS-427-162	N76-18014* #	c 02	NASA-CASE-LAR-11575-1			US-PATENT-APPL-SN-419319
		US-PATENT-CLASS-427-250			US-PATENT-APPL-SN-527727			US-PATENT-CLASS-165-105
		US-PATENT-3,927,227			US-PATENT-CLASS-244-139			US-PATENT-CLASS-165-106
N76-15288* #	c 23	NASA-CASE-MFS-22355-1			US-PATENT-3,930,628			US-PATENT-CLASS-237-60
		US-PATENT-APPL-SN-487852	N76-18228* #	c 27	NASA-CASE-NPO-12061-1			US-PATENT-CLASS-244-117A
		US-PATENT-CLASS-260-32.6N			US-PATENT-APPL-SN-45549			US-PATENT-CLASS-244-135R
		US-PATENT-CLASS-260-32.8N			US-PATENT-CLASS-260-879			US-PATENT-CLASS-417-209
		US-PATENT-CLASS-260-346.3			US-PATENT-CLASS-260-900	N76-17856* #	c 45	US-PATENT-3,929,305
		US-PATENT-CLASS-260-47CP			US-PATENT-CLASS-260-92.1			NASA-CASE-LAR-11675-1
		US-PATENT-CLASS-260-571			US-PATENT-3,931,132			US-PATENT-APPL-SN-557448
		US-PATENT-CLASS-260-78TF	N76-18229* #	c 27	NASA-CASE-LEW-11179-1			US-PATENT-CLASS-178-DIG.1
		US-PATENT-3,925,312			US-PATENT-APPL-SN-357312			US-PATENT-CLASS-178-DIG.8
N76-15310* #	c 27	NASA-CASE-ARC-10714-1			US-PATENT-CLASS-29-195A			US-PATENT-CLASS-250-373
		US-PATENT-APPL-SN-398885			US-PATENT-CLASS-427-203			US-PATENT-CLASS-340-237S
		US-PATENT-CLASS-260-2.5AK			US-PATENT-CLASS-427-204			US-PATENT-CLASS-356-207
		US-PATENT-CLASS-427-196			US-PATENT-CLASS-427-205			US-PATENT-3,931,462
		US-PATENT-CLASS-427-426			US-PATENT-CLASS-427-270	N76-17951* #	c 75	NASA-CASE-MFS-22145-2
		US-PATENT-CLASS-428-303			US-PATENT-CLASS-427-275			US-PATENT-APPL-SN-367606
		US-PATENT-3,916,060			US-PATENT-CLASS-427-287			US-PATENT-APPL-SN-500982
N76-15311* #	c 27	NASA-CASE-NPO-13120-1			US-PATENT-CLASS-428-450			US-PATENT-CLASS-124-I
		US-PATENT-APPL-SN-348422			US-PATENT-CLASS-428-457			US-PATENT-CLASS-124-11R
		US-PATENT-CLASS-29-182.5			US-PATENT-CLASS-428-469			US-PATENT-CLASS-89-8
		US-PATENT-3,926,567			US-PATENT-CLASS-428-539			US-PATENT-3,929,119
N76-15329* #	c 32	NASA-CASE-GSC-11968-1	N76-18230* #	c 27	NASA-CASE-ARC-10813-1	N76-18117* #	c 07	NASA-CASE-LAR-11674-1
		US-PATENT-APPL-SN-512825			US-PATENT-APPL-SN-437556			US-PATENT-APPL-SN-331759
		US-PATENT-CLASS-343-779			US-PATENT-CLASS-264-331			US-PATENT-APPL-SN-488616
		US-PATENT-CLASS-343-837			US-PATENT-CLASS-428-412			US-PATENT-CLASS-181-33HC
		US-PATENT-CLASS-343-876			US-PATENT-CLASS-428-413			US-PATENT-CLASS-239-265.11
		US-PATENT-3,927,408			US-PATENT-CLASS-428-447			US-PATENT-3,938,742
N76-15330* #	c 32	NASA-CASE-LAR-11112-1			US-PATENT-CLASS-428-911	N76-18245* #	c 25	NASA-CASE-NPO-13063-1
		US-PATENT-APPL-SN-491419			US-PATENT-CLASS-428-920			US-PATENT-APPL-SN-227977
		US-PATENT-CLASS-343-786			US-PATENT-CLASS-428-921			US-PATENT-CLASS-23-230M
		US-PATENT-3,924,237			US-PATENT-CLASS-428-922			US-PATENT-CLASS-23-230R
N76-15373* #	c 33	NASA-CASE-LEW-11938-1	N76-18249* #	c 32	NASA-CASE-MSC-14557-1			US-PATENT-CLASS-23-232C
		US-PATENT-APPL-SN-544611			US-PATENT-APPL-SN-428994			US-PATENT-CLASS-23-253R
		US-PATENT-CLASS-317-258			US-PATENT-APPL-SN-464720			US-PATENT-CLASS-23-254R
		US-PATENT-CLASS-317-261			US-PATENT-CLASS-178-69C			US-PATENT-CLASS-23-255R
		US-PATENT-3,924,164			US-PATENT-CLASS-178-88			US-PATENT-CLASS-235-151.13
N76-15431* #	c 35	NASA-CASE-MSC-13802-2			US-PATENT-CLASS-325-321			US-PATENT-CLASS-73-23.1
		US-PATENT-APPL-SN-189438			US-PATENT-3,924,068	N76-18257* #	c 26	NASA-CASE-MFS-22907-1
		US-PATENT-APPL-SN-475338	N76-18331* #	c 33	NASA-CASE-MSC-14649-1			US-PATENT-APPL-SN-518546
		US-PATENT-CLASS-250-251			US-PATENT-APPL-SN-505819			US-PATENT-CLASS-324-34R
		US-PATENT-CLASS-250-287			US-PATENT-CLASS-324-79D			US-PATENT-3,938,037
		US-PATENT-CLASS-250-423			US-PATENT-CLASS-328-134	N76-18295* #	c 32	NASA-CASE-GSC-11862-1
		US-PATENT-3,916,187			US-PATENT-3,924,183			US-PATENT-APPL-SN-500979
N76-15432* #	c 35	NASA-CASE-LAR-11435-1	N76-18332* #	c 33	NASA-CASE-GSC-11849-1			US-PATENT-CLASS-343-837
		US-PATENT-APPL-SN-522556			US-PATENT-APPL-SN-470428			US-PATENT-CLASS-343-840
		US-PATENT-CLASS-310-8.2			US-PATENT-CLASS-174-145			US-PATENT-CLASS-343-912
		US-PATENT-CLASS-73-1R			US-PATENT-CLASS-174-148			US-PATENT-CLASS-343-915
		US-PATENT-3,924,444			US-PATENT-CLASS-339-143C			US-PATENT-3,938,162
N76-15433* #	c 35	NASA-CASE-GSC-11892-1			US-PATENT-CLASS-339-198R	N76-18345* #	c 33	NASA-CASE-NPO-13385-1
		US-PATENT-APPL-SN-502135			US-PATENT-CLASS-339-242			US-PATENT-APPL-SN-501011
		US-PATENT-CLASS-250-336			US-PATENT-CLASS-339-275R			US-PATENT-CLASS-340-347AD
		US-PATENT-CLASS-250-385			US-PATENT-3,931,456			US-PATENT-3,938,188
		US-PATENT-CLASS-250-489	N76-18390* #	c 35	NASA-CASE-NPO-13388-1	N76-18353* #	c 33	NASA-CASE-GSC-11925-1
		US-PATENT-3,927,324			US-PATENT-APPL-SN-522552			US-PATENT-APPL-SN-538983
N76-15434* #	c 35	NASA-CASE-LEW-11072-2			US-PATENT-CLASS-324-43R			US-PATENT-CLASS-360-26
		US-PATENT-APPL-SN-254323			US-PATENT-3,924,176			US-PATENT-CLASS-360-51
		US-PATENT-CLASS-136-211	N76-18391* #	c 35	NASA-CASE-NPO-10166-2			US-PATENT-3,938,182
		US-PATENT-CLASS-136-212			US-PATENT-APPL-SN-192803	N76-18364* #	c 34	NASA-CASE-LAR-11570-1
		US-PATENT-CLASS-136-225			US-PATENT-APPL-SN-668116			US-PATENT-APPL-SN-482967
		US-PATENT-3,925,104			US-PATENT-CLASS-360-10			US-PATENT-CLASS-244-23D
N76-15435* #	c 35	NASA-CASE-NPO-13506-1			US-PATENT-CLASS-360-101			US-PATENT-CLASS-60-316
		US-PATENT-APPL-SN-483851			US-PATENT-CLASS-360-35			US-PATENT-3,940,097
		US-PATENT-CLASS-343-909			US-PATENT-CLASS-360-9	N76-18374* #	c 34	NASA-CASE-MFS-22938-1
		US-PATENT-3,924,239			US-PATENT-3,924,267			US-PATENT-APPL-SN-542754
N76-15436* #	c 35	NASA-CASE-GSC-11895-1	N76-18392* #	c 35	NASA-CASE-LAR-11458-1			US-PATENT-CLASS-250-335
		US-PATENT-APPL-SN-511887			US-PATENT-APPL-SN-504225			US-PATENT-3,940,821
		US-PATENT-CLASS-331-3			US-PATENT-CLASS-294-1R	N76-18400* #	c 35	NASA-CASE-LAR-10208-1
		US-PATENT-CLASS-331-94			US-PATENT-CLASS-294-19R			US-PATENT-APPL-SN-483858
		US-PATENT-3,924,200			US-PATENT-3,929,364			US-PATENT-CLASS-73-103
N76-15457* #	c 37	NASA-CASE-MFS-22707-1	N76-18393* #	c 35	NASA-CASE-GSC-11889-1			US-PATENT-CLASS-73-95
		US-PATENT-APPL-SN-535410			US-PATENT-APPL-SN-502124			US-PATENT-3,938,373
		US-PATENT-CLASS-214-1R			US-PATENT-CLASS-250-281	N76-18401* #	c 35	NASA-CASE-NPO-13396-1
		US-PATENT-CLASS-74-384			US-PATENT-CLASS-250-287			US-PATENT-APPL-SN-563283
		US-PATENT-CLASS-74-665B			US-PATENT-CLASS-250-288			US-PATENT-CLASS-55-261
		US-PATENT-3,922,930			US-PATENT-CLASS-250-385			US-PATENT-CLASS-73-28
N76-15460* #	c 37	NASA-CASE-MFS-22022-1			US-PATENT-CLASS-250-423			US-PATENT-CLASS-73-421.5R
		US-PATENT-APPL-SN-405341			US-PATENT-3,931,516			US-PATENT-3,938,367
		US-PATENT-CLASS-214-1CM	N76-16446* #	c 37	NASA-CASE-NPO-13342-1	N76-18402* #	c 35	NASA-CASE-MFS-22517-1
		US-PATENT-3,923,166			US-PATENT-APPL-SN-390049			US-PATENT-APPL-SN-506804
N76-15461* #	c 37	NASA-CASE-LEW-11076-4	N76-16612* #	c 44	NASA-CASE-MFS-22002-1			US-PATENT-CLASS-350-3.5
		US-PATENT-APPL-SN-238264			US-PATENT-APPL-SN-452769			
		US-PATENT-APPL-SN-346483						

		US-PATENT-3,937,555			US-PATENT-CLASS-73-88.5SD			N76-21554* #	c 37	NASA-CASE-LAR-11465-1
N76-18403* #	c 35	NASA-CASE-ARC-10322-1			US-PATENT-3,937,212					US-PATENT-APPL-SN-502137
		US-PATENT-APPL-SN-484209		N76-19339* #	c 33	NASA-CASE-ARC-10810-1				US-PATENT-CLASS-156-286
		US-PATENT-CLASS-23-254EF				US-PATENT-APPL-SN-489009				US-PATENT-CLASS-156-382
		US-PATENT-3,938,956				US-PATENT-CLASS-204-195R				US-PATENT-CLASS-156-556
N76-18427* #	c 36	NASA-CASE-NPO-11945-1				US-PATENT-CLASS-215-247				US-PATENT-CLASS-248-362
		US-PATENT-APPL-SN-269450				US-PATENT-CLASS-324-30B				US-PATENT-CLASS-248-363
		US-PATENT-CLASS-331-94.5				US-PATENT-3,938,035				US-PATENT-CLASS-269-21
		US-PATENT-CLASS-332-7.51		N76-19436* #	c 37	NASA-CASE-MFS-20607-1				US-PATENT-CLASS-33-1G
		US-PATENT-CLASS-350-150				US-PATENT-APPL-SN-478800				US-PATENT-CLASS-33-174B
		US-PATENT-CLASS-350-160				US-PATENT-CLASS-222-145				US-PATENT-3,945,879
		US-PATENT-CLASS-423-352				US-PATENT-CLASS-259-4AC		N76-21742* #	c 45	NASA-CASE-NPO-13474-1
		US-PATENT-CLASS-423-644				US-PATENT-3,941,355				US-PATENT-APPL-SN-521817
		US-PATENT-3,806,834				NASA-CASE-MSC-12615-1				US-PATENT-CLASS-23-254E
N76-18428* #	c 36	NASA-CASE-NPO-13544-1		N76-19437* #	c 37	US-PATENT-APPL-SN-491417				US-PATENT-CLASS-250-574
		US-PATENT-APPL-SN-533555				US-PATENT-CLASS-244-117A				US-PATENT-CLASS-356-37
		US-PATENT-CLASS-331-94.5C				US-PATENT-CLASS-244-163				US-PATENT-3,945,801
		US-PATENT-CLASS-350-96WG				US-PATENT-CLASS-29-432		N76-21914* #	c 60	NASA-CASE-NPO-13139-1
		US-PATENT-3,939,439				US-PATENT-CLASS-29-433				US-PATENT-APPL-SN-393524
N76-18454* #	c 37	NASA-CASE-MFS-23047-1				US-PATENT-CLASS-29-526				US-PATENT-CLASS-235-153AE
		US-PATENT-APPL-SN-521602				US-PATENT-CLASS-52-705				US-PATENT-CLASS-340-172.5
		US-PATENT-CLASS-173-132				US-PATENT-CLASS-52-758F				US-PATENT-3,950,729
		US-PATENT-CLASS-29-81D				US-PATENT-3,936,927		N76-22154* #	c 02	NASA-CASE-LAR-10585-1
		US-PATENT-CLASS-72-453		N76-19785* #	c 52	NASA-CASE-LAR-11667-1				US-PATENT-APPL-SN-197183
		US-PATENT-CLASS-73-399				US-PATENT-APPL-SN-583487				US-PATENT-CLASS-244-35R
		US-PATENT-3,937,055				US-PATENT-CLASS-128-DIG.20				US-PATENT-CLASS-244-40R
N76-18455* #	c 37	NASA-CASE-MSC-14435-1				US-PATENT-CLASS-128-26				US-PATENT-3,952,971
		US-PATENT-APPL-SN-450500				US-PATENT-3,937,215		N76-22245* #	c 17	NASA-CASE-GSC-11868-1
		US-PATENT-CLASS-228-193		N76-19888* #	c 66	NASA-CASE-MFS-22631-1				US-PATENT-APPL-SN-565290
		US-PATENT-CLASS-228-206				US-PATENT-APPL-SN-531572				US-PATENT-CLASS-178-69.5
		US-PATENT-CLASS-228-214				US-PATENT-CLASS-340-38P				US-PATENT-CLASS-328-155
		US-PATENT-CLASS-228-238				US-PATENT-CLASS-356-162				US-PATENT-CLASS-340-147SY
		US-PATENT-3,937,387				US-PATENT-CLASS-356-167				US-PATENT-3,953,674
N76-18456* #	c 37	NASA-CASE-LAR-11224-1				US-PATENT-CLASS-356-71		N76-22284* #	c 19	NASA-CASE-MFS-22905-1
		US-PATENT-APPL-SN-450502		N76-19935* #	c 74	US-PATENT-3,930,735				US-PATENT-APPL-SN-518545
		US-PATENT-CLASS-134-21				NASA-CASE-MFS-21672-1				US-PATENT-CLASS-188-1B
		US-PATENT-CLASS-134-37				US-PATENT-APPL-SN-354060				US-PATENT-CLASS-248-22
		US-PATENT-CLASS-19-205				US-PATENT-CLASS-356-123				US-PATENT-CLASS-248-358R
		US-PATENT-CLASS-209-250				US-PATENT-CLASS-356-124				US-PATENT-3,952,980
		US-PATENT-CLASS-209-300		N76-20114* #	c 04	NASA-CASE-LAR-11387-1		N76-22296* #	c 20	NASA-CASE-MFS-19220-1
		US-PATENT-CLASS-209-305				US-PATENT-APPL-SN-531647				US-PATENT-APPL-SN-571821
		US-PATENT-3,937,661				US-PATENT-CLASS-33-356				US-PATENT-CLASS-254-12
N76-18457* #	c 37	NASA-CASE-NPO-13402-1				US-PATENT-CLASS-75-178R				US-PATENT-CLASS-254-93R
		US-PATENT-APPL-SN-387342				US-PATENT-3,943,763				US-PATENT-CLASS-89-1.801
		US-PATENT-CLASS-123-DIG.12		N76-20480* #	c 37	NASA-CASE-NPO-13059-1				US-PATENT-3,952,998
		US-PATENT-CLASS-123-119E				NASA-CASE-NPO-13436-1		N76-22309* #	c 24	NASA-CASE-LEW-11930-1
		US-PATENT-CLASS-123-120				US-PATENT-APPL-SN-513690				US-PATENT-APPL-SN-513611
		US-PATENT-CLASS-123-121				US-PATENT-CLASS-81-56				US-PATENT-CLASS-252-12
		US-PATENT-CLASS-123-89A				US-PATENT-CLASS-81-57.31				US-PATENT-3,953,343
		US-PATENT-3,906,913		N76-20958* #	c 74	US-PATENT-3,942,398		N76-22323* #	c 25	NASA-CASE-ARC-10760-1
N76-18458* #	c 37	NASA-CASE-LEW-11860-1				NASA-CASE-ARC-10631-1				US-PATENT-APPL-SN-526438
		US-PATENT-APPL-SN-527728				US-PATENT-APPL-SN-514546				US-PATENT-CLASS-250-343
		US-PATENT-CLASS-204-157.1H				US-PATENT-CLASS-250-343				US-PATENT-CLASS-250-344
		US-PATENT-CLASS-250-527				US-PATENT-CLASS-250-573				US-PATENT-CLASS-250-432R
		US-PATENT-3,939,048				US-PATENT-3,943,368				US-PATENT-3,953,734
N76-18459* #	c 37	NASA-CASE-GSC-11551-1		N76-20994* #	c 76	NASA-CASE-NPO-13443-1		N76-22376* #	c 27	NASA-CASE-ARC-10721-1
		US-PATENT-APPL-SN-440917				US-PATENT-APPL-SN-522551				US-PATENT-APPL-SN-427775
		US-PATENT-CLASS-308-10				US-PATENT-CLASS-324-158D				US-PATENT-CLASS-264-60
		US-PATENT-3,937,533				US-PATENT-CLASS-324-158R				US-PATENT-CLASS-264-63
N76-18641* #	c 44	NASA-CASE-NPO-13237-1				US-PATENT-CLASS-324-158T				US-PATENT-CLASS-264-66
		US-PATENT-APPL-SN-378127				US-PATENT-CLASS-324-60C				US-PATENT-3,952,083
		US-PATENT-CLASS-136-83R				US-PATENT-3,943,442		N76-22377* #	c 27	NASA-CASE-MSC-14270-1
		US-PATENT-CLASS-136-86S				NASA-CASE-MSC-12593-1				US-PATENT-APPL-SN-482104
		US-PATENT-3,894,887		N76-21250* #	c 17	US-PATENT-APPL-SN-419747				US-PATENT-CLASS-106-54
N76-18642* #	c 44	NASA-CASE-NPO-13464-1				US-PATENT-CLASS-325-14				US-PATENT-CLASS-427-376
		US-PATENT-APPL-SN-428444				US-PATENT-CLASS-343-100SA				US-PATENT-CLASS-427-379
		US-PATENT-CLASS-123-3				US-PATENT-CLASS-343-100ST				US-PATENT-CLASS-427-380
		US-PATENT-CLASS-23-281				US-PATENT-CLASS-343-112TC				US-PATENT-CLASS-427-402
		US-PATENT-CLASS-423-650				US-PATENT-3,949,400				US-PATENT-CLASS-428-332
		US-PATENT-CLASS-48-116		N76-21275* #	c 20	NASA-CASE-MFS-21311-1				US-PATENT-CLASS-428-428
		US-PATENT-CLASS-48-117				US-PATENT-APPL-SN-493359				US-PATENT-CLASS-428-450
		US-PATENT-CLASS-48-63				US-PATENT-CLASS-244-3.22				US-PATENT-CLASS-428-538
		US-PATENT-CLASS-48-75				US-PATENT-3,948,470				US-PATENT-CLASS-428-920
		US-PATENT-CLASS-48-95		N76-21276* #	c 20	NASA-CASE-LEW-11876-1				US-PATENT-3,953,646
		US-PATENT-3,920,416				US-PATENT-APPL-SN-542157		N76-22509* #	c 35	NASA-CASE-LAR-11434-1
N76-18643* #	c 44	NASA-CASE-NPO-11961-1				US-PATENT-CLASS-29-25.18				US-PATENT-APPL-SN-464722
		US-PATENT-APPL-SN-378126				US-PATENT-3,947,933				US-PATENT-CLASS-209-127R
		US-PATENT-CLASS-136-30				NASA-CASE-NPO-13568-1				US-PATENT-CLASS-317-246
		US-PATENT-CLASS-136-6LF		N76-21365* #	c 32	US-PATENT-APPL-SN-534265				US-PATENT-CLASS-324-61R
		US-PATENT-CLASS-320-21				US-PATENT-CLASS-343-761				US-PATENT-CLASS-324-71CP
		US-PATENT-CLASS-320-22				US-PATENT-CLASS-343-781				US-PATENT-3,953,792
		US-PATENT-3,912,999				US-PATENT-CLASS-343-786		N76-22540* #	c 37	NASA-CASE-MFS-22636-1
N76-18800* #	c 60	NASA-CASE-NPO-13067-1				US-PATENT-3,949,404				US-PATENT-APPL-SN-536762
		US-PATENT-APPL-SN-274348		N76-21366* #	c 32	NASA-CASE-MFS-22729-1				US-PATENT-CLASS-114-16.6
		US-PATENT-CLASS-340-172.5				US-PATENT-APPL-SN-533608				US-PATENT-CLASS-244-137P
		US-PATENT-3,829,839				US-PATENT-CLASS-235-156				US-PATENT-CLASS-244-158
N76-18913* #	c 74	NASA-CASE-GSC-11877-1				US-PATENT-CLASS-325-42				US-PATENT-CLASS-244-161
		US-PATENT-APPL-SN-482953				US-PATENT-CLASS-333-18				US-PATENT-3,952,976
		US-PATENT-CLASS-235-184				US-PATENT-3,949,206		N76-22541* #	c 37	NASA-CASE-LEW-11676-1
		US-PATENT-CLASS-250-199				NASA-CASE-ARC-10711-2				US-PATENT-APPL-SN-551184
		US-PATENT-3,937,945		N76-21390* #	c 33	US-PATENT-APPL-SN-493363				US-PATENT-CLASS-277-4
N76-19338* #	c 33	NASA-CASE-NPO-13519-1				US-PATENT-APPL-SN-596788				US-PATENT-CLASS-277-74
		US-PATENT-APPL-SN-536761				US-PATENT-CLASS-317-246				US-PATENT-CLASS-277-93R
		US-PATENT-CLASS-128-2S				US-PATENT-CLASS-73-398C				US-PATENT-3,953,038
		US-PATENT-CLASS-33-155R				US-PATENT-3,948,102				
		US-PATENT-CLASS-33-174D								

N76-22657* #	c 44	NASA-CASE-MFS-22743-1 US-PATENT-APPL-SN-518684 US-PATENT-CLASS-126-271 US-PATENT-3,951,129	US-PATENT-CLASS-126-271 US-PATENT-CLASS-350-293 US-PATENT-CLASS-350-299 US-PATENT-3,958,553	US-PATENT-CLASS-427-248 US-PATENT-CLASS-427-249 US-PATENT-CLASS-427-250 US-PATENT-CLASS-427-86 US-PATENT-3,961,997	
N76-22914* #	c 54	NASA-CASE-GSC-12082-1 US-PATENT-APPL-SN-678958	N76-24900* #	c 54	NASA-CASE-MSC-14733-1 NASA-CASE-MSC-14735-1 US-PATENT-APPL-SN-522971 US-PATENT-CLASS-128-142.2 US-PATENT-CLASS-128-203 US-PATENT-CLASS-137-DIG.9 US-PATENT-CLASS-137-110 US-PATENT-3,957,044
N76-22993* #	c 74	NASA-CASE-ARC-10932-1 US-PATENT-APPL-SN-681001	N76-25049* #	c 76	NASA-CASE-LEW-12094-1 US-PATENT-APPL-SN-508784 US-PATENT-CLASS-148-175 US-PATENT-CLASS-156-610 US-PATENT-CLASS-156-612 US-PATENT-CLASS-156-613 US-PATENT-CLASS-252-62.3 US-PATENT-CLASS-423-345 US-PATENT-CLASS-423-346 US-PATENT-3,956,032
N76-23273* #	c 09	NASA-CASE-MFS-23099-1 US-PATENT-APPL-SN-607969 US-PATENT-CLASS-73-147 US-PATENT-3,952,590	N76-26175* #	c 04	NASA-CASE-MFS-23551-1 US-PATENT-APPL-SN-114772 US-PATENT-CLASS-244-79 US-PATENT-CLASS-74-5.34 US-PATENT-3,739,646
N76-23426* #	c 27	NASA-CASE-MSC-14270-2 US-PATENT-APPL-SN-482105 US-PATENT-CLASS-106-54 US-PATENT-CLASS-427-376 US-PATENT-CLASS-427-379 US-PATENT-CLASS-427-380 US-PATENT-CLASS-427-402 US-PATENT-CLASS-428-332 US-PATENT-CLASS-428-428 US-PATENT-CLASS-428-450 US-PATENT-CLASS-428-538 US-PATENT-CLASS-428-920 US-PATENT-3,955,034	N76-27232* #	c 07	NASA-CASE-LAR-11476-1 US-PATENT-APPL-SN-592159 US-PATENT-CLASS-73-557 US-PATENT-3,964,319
N76-23570* #	c 37	NASA-CASE-LEW-11169-1 US-PATENT-APPL-SN-446568 US-PATENT-CLASS-164-132 US-PATENT-3,957,104	N76-27383* #	c 25	NASA-CASE-LEW-11390-2 US-PATENT-APPL-SN-247434 US-PATENT-APPL-SN-340863 US-PATENT-CLASS-176-11 US-PATENT-CLASS-176-16 US-PATENT-CLASS-250-400 US-PATENT-CLASS-250-429 US-PATENT-CLASS-250-492R US-PATENT-3,971,697
N76-23675* #	c 44	NASA-CASE-MFS-21628-2 US-PATENT-APPL-SN-421702 US-PATENT-APPL-SN-561020 US-PATENT-CLASS-126-270 US-PATENT-CLASS-165-133 US-PATENT-3,957,030	N76-27472* #	c 33	NASA-CASE-GSC-11924-1 US-PATENT-APPL-SN-582318 US-PATENT-CLASS-343-755 US-PATENT-CLASS-343-779 US-PATENT-CLASS-343-854 US-PATENT-3,965,475
N76-23850* #	c 60	NASA-CASE-MSC-14082-1 US-PATENT-APPL-SN-315070 US-PATENT-CLASS-340-347DD US-PATENT-CLASS-340-347P US-PATENT-3,958,238	N76-27473* #	c 33	NASA-CASE-HQN-10876-1 US-PATENT-APPL-SN-555336 US-PATENT-CLASS-250-336 US-PATENT-CLASS-250-372 US-PATENT-3,965,354
N76-24280* #	c 09	NASA-CASE-ARC-10808-1 US-PATENT-APPL-SN-505881 US-PATENT-CLASS-178-DIG.35 US-PATENT-CLASS-178-7.89 US-PATENT-CLASS-35-12N US-PATENT-3,956,833	N76-27515* #	c 34	NASA-CASE-NPO-13391-1 US-PATENT-APPL-SN-446567 US-PATENT-CLASS-165-105 US-PATENT-CLASS-29-182 US-PATENT-CLASS-29-193 US-PATENT-CLASS-55-523 US-PATENT-CLASS-55-526 US-PATENT-CLASS-75-225 US-PATENT-3,964,902
N76-24363* #	c 24	NASA-CASE-GSC-11786-1 US-PATENT-APPL-SN-401919 US-PATENT-CLASS-106-306 US-PATENT-CLASS-250-372 US-PATENT-CLASS-252-300 US-PATENT-CLASS-350-1 US-PATENT-3,957,675	N76-27517* #	c 34	NASA-CASE-ARC-10755-2 US-PATENT-APPL-SN-424013 US-PATENT-APPL-SN-545284 US-PATENT-CLASS-73-147 US-PATENT-CLASS-73-189 US-PATENT-CLASS-73-194R US-PATENT-3,964,306
N76-24405* #	c 27	NASA-CASE-MSC-14331-1 US-PATENT-APPL-SN-374421 US-PATENT-CLASS-106-15FP US-PATENT-CLASS-260-DIG.24 US-PATENT-CLASS-260-33.8F US-PATENT-CLASS-260-45.7 US-PATENT-CLASS-260-92.1 US-PATENT-CLASS-526-1 US-PATENT-CLASS-526-255 US-PATENT-3,956,233	N76-27567* #	c 37	NASA-CASE-LAR-11709-1 US-PATENT-APPL-SN-548468 US-PATENT-CLASS-339-17M US-PATENT-CLASS-339-18C US-PATENT-3,964,813
N76-24523* #	c 35	NASA-CASE-LAR-11500-1 US-PATENT-APPL-SN-534266 US-PATENT-CLASS-73-1B US-PATENT-CLASS-73-15.6 US-PATENT-3,956,919	N76-27568* #	c 37	NASA-CASE-LAR-11726-1 US-PATENT-APPL-SN-538047 US-PATENT-CLASS-219-118 US-PATENT-CLASS-219-92 US-PATENT-3,967,091
N76-24524* #	c 35	NASA-CASE-NPO-13462-1 US-PATENT-APPL-SN-545282 US-PATENT-CLASS-73-189 US-PATENT-CLASS-73-204 US-PATENT-3,956,932	N76-27664* #	c 44	NASA-CASE-MFS-23059-1 US-PATENT-APPL-SN-537024 US-PATENT-CLASS-136-86A US-PATENT-3,964,928
N76-24525* #	c 35	NASA-CASE-ARC-10816-1 US-PATENT-APPL-SN-552454 US-PATENT-CLASS-128-DIG.4 US-PATENT-CLASS-128-2.05V US-PATENT-CLASS-128-2.1E US-PATENT-CLASS-128-2.1Z US-PATENT-3,957,037	N76-28563* #	c 38	NASA-CASE-NPO-12142-1 US-PATENT-APPL-SN-637249 US-PATENT-CLASS-73-88.5 US-PATENT-3,545,262
N76-24553* #	c 36	NASA-CASE-NPO-13531-1 US-PATENT-APPL-SN-531565 US-PATENT-CLASS-331-94.5C US-PATENT-CLASS-350-96WG US-PATENT-3,958,188	N76-28635* #	c 44	NASA-CASE-GSC-12022-1 NASA-CASE-GSC-12023-1 US-PATENT-APPL-SN-576488 US-PATENT-CLASS-136-89 US-PATENT-CLASS-148-174 US-PATENT-CLASS-148-175 US-PATENT-CLASS-156-612 US-PATENT-CLASS-156-613 US-PATENT-CLASS-156-614 US-PATENT-CLASS-29-572 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-59 US-PATENT-CLASS-427-113
N76-24575* #	c 37	NASA-CASE-LAR-10073-1 US-PATENT-APPL-SN-436317 US-PATENT-CLASS-156-242 US-PATENT-CLASS-156-286 US-PATENT-CLASS-264-102 US-PATENT-CLASS-264-267 US-PATENT-CLASS-428-117 US-PATENT-3,956,050	N76-29217* #	c 05	NASA-CASE-ARC-10470-3 US-PATENT-APPL-SN-206279 US-PATENT-APPL-SN-321180 US-PATENT-APPL-SN-496779 US-PATENT-CLASS-244-46 US-PATENT-3,971,535
N76-24696* #	c 44	NASA-CASE-MFS-22744-1 US-PATENT-APPL-SN-518544 US-PATENT-CLASS-126-270	N76-29347* #	c 17	NASA-CASE-ARC-10849-1 US-PATENT-APPL-SN-563049 US-PATENT-CLASS-340-189M US-PATENT-CLASS-340-206 US-PATENT-CLASS-73-493 US-PATENT-CLASS-73-517R US-PATENT-3,972,038
			N76-29379* #	c 25	NASA-CASE-LEW-11390-3 US-PATENT-APPL-SN-247434 US-PATENT-APPL-SN-380046 US-PATENT-CLASS-176-11 US-PATENT-CLASS-176-16 US-PATENT-CLASS-176-16 US-PATENT-CLASS-250-400 US-PATENT-CLASS-250-429 US-PATENT-CLASS-250-492R US-PATENT-3,971,697
			N76-29551* #	c 35	NASA-CASE-LAR-10907-1 US-PATENT-APPL-SN-559845 US-PATENT-CLASS-250-340 US-PATENT-CLASS-250-353 US-PATENT-3,971,940
			N76-29552* #	c 35	NASA-CASE-MSC-12617-1 US-PATENT-APPL-SN-513576 US-PATENT-CLASS-235-61NV US-PATENT-CLASS-235-78M US-PATENT-CLASS-235-88M US-PATENT-3,971,915
			N76-29575* #	c 36	NASA-CASE-NPO-13346-1 US-PATENT-APPL-SN-533556 US-PATENT-CLASS-330-4.3 US-PATENT-CLASS-331-94.5C US-PATENT-3,972,008
			N76-29588* #	c 37	NASA-CASE-LEW-11949-1 US-PATENT-APPL-SN-590182 US-PATENT-CLASS-308-160 US-PATENT-CLASS-308-163 US-PATENT-CLASS-308-170 US-PATENT-3,971,602
			N76-29590* #	c 37	NASA-CASE-NPO-13613-1 US-PATENT-APPL-SN-574208 US-PATENT-CLASS-62-6 US-PATENT-3,971,230
			N76-29699* #	c 44	NASA-CASE-HQN-10862-1 US-PATENT-APPL-SN-604374 US-PATENT-CLASS-136-143 US-PATENT-CLASS-136-30 US-PATENT-3,972,727
			N76-29700* #	c 44	NASA-CASE-NPO-13342-2 US-PATENT-APPL-SN-390049 US-PATENT-APPL-SN-548559 US-PATENT-CLASS-123-1A US-PATENT-CLASS-123-3 US-PATENT-CLASS-23-281 US-PATENT-CLASS-423-650 US-PATENT-CLASS-48-215 US-PATENT-CLASS-48-95 US-PATENT-3,955,941
			N76-29701* #	c 44	NASA-CASE-NPO-13567-1 US-PATENT-APPL-SN-566493 US-PATENT-CLASS-417-141 US-PATENT-CLASS-417-207 US-PATENT-CLASS-417-209 US-PATENT-CLASS-417-379 US-PATENT-CLASS-60-517 US-PATENT-CLASS-62-6 US-PATENT-3,972,651
			N76-29704* #	c 44	NASA-CASE-NPO-13464-2 US-PATENT-APPL-SN-428444 US-PATENT-APPL-SN-553687 US-PATENT-CLASS-252-373 US-PATENT-CLASS-42-215 US-PATENT-CLASS-423-650 US-PATENT-CLASS-431-163 US-PATENT-CLASS-431-210 US-PATENT-CLASS-431-4 US-PATENT-CLASS-48-197R US-PATENT-3,971,847
			N76-29891* #	c 51	NASA-CASE-GSC-11917-2 US-PATENT-APPL-SN-475337 US-PATENT-APPL-SN-555641 US-PATENT-CLASS-195-103.5R US-PATENT-3,971,703
			N76-29894* #	c 52	NASA-CASE-ARC-10583-1 US-PATENT-APPL-SN-301418

		US-PATENT-CLASS-128-2.1A			US-PATENT-CLASS-136-89			US-PATENT-CLASS-323-22T
		US-PATENT-CLASS-128-2H			US-PATENT-3,966,499			US-PATENT-CLASS-323-23
		US-PATENT-CLASS-128-2P			NASA-CASE-MFS-23167-1			US-PATENT-3,984,799
		US-PATENT-3,971,362			US-PATENT-APPL-SN-602618			NASA-CASE-GSC-11963-1
N76-29895* #	c 52	NASA-CASE-NPO-13644-1			US-PATENT-CLASS-165-10			US-PATENT-APPL-SN-595197
		US-PATENT-APPL-SN-574218			US-PATENT-CLASS-60-659			US-PATENT-CLASS-244-1A
		US-PATENT-CLASS-128-2.05R			US-PATENT-3,977,197			US-PATENT-CLASS-244-42CG
		US-PATENT-CLASS-128-2S			NASA-CASE-LAR-11405-1			US-PATENT-CLASS-317-2D
		US-PATENT-CLASS-338-6			US-PATENT-APPL-SN-537480			US-PATENT-CLASS-324-72
		US-PATENT-3,971,363			US-PATENT-CLASS-23-230R			US-PATENT-3,984,730
N76-29896* #	c 52	NASA-CASE-NPO-13643-1			US-PATENT-CLASS-23-232E			NASA-CASE-MFS-22991-1
		US-PATENT-APPL-SN-578241			US-PATENT-CLASS-23-232R			US-PATENT-APPL-SN-521006
		US-PATENT-CLASS-128-2.05E			US-PATENT-3,977,831			US-PATENT-CLASS-165-164
		US-PATENT-CLASS-128-2.06E			NASA-CASE-GSC-12115-1			US-PATENT-CLASS-165-170
		US-PATENT-CLASS-128-2S			US-PATENT-APPL-SN-262596			US-PATENT-3,983,933
		US-PATENT-CLASS-128-418			US-PATENT-CLASS-340-347SY			NASA-CASE-NPO-13479-1
		US-PATENT-CLASS-128-419P			US-PATENT-3,976,997			US-PATENT-APPL-SN-500981
		US-PATENT-CLASS-73-398AR			NASA-CASE-MSC-12640-1			US-PATENT-CLASS-250-290
		US-PATENT-3,971,364			US-PATENT-APPL-SN-591568			US-PATENT-CLASS-250-291
N76-30053* #	c 74	NASA-CASE-GSC-11782-1			US-PATENT-CLASS-350-162SF			US-PATENT-3,984,681
		US-PATENT-APPL-SN-463925			US-PATENT-3,977,771			NASA-CASE-MFS-23178-1
		US-PATENT-CLASS-250-199			NASA-CASE-MFS-16609-3			US-PATENT-APPL-SN-637247
		US-PATENT-3,971,930			US-PATENT-APPL-SN-307714			US-PATENT-CLASS-250-338
N76-30131* #	c 91	NASA-CASE-MSC-12423-1			US-PATENT-APPL-SN-511894			US-PATENT-CLASS-250-339
		US-PATENT-APPL-SN-448320			US-PATENT-APPL-SN-82279			US-PATENT-CLASS-250-347
		US-PATENT-CLASS-73-170R			US-PATENT-CLASS-325-114			US-PATENT-CLASS-356-106R
		US-PATENT-CLASS-73-425.2			US-PATENT-CLASS-325-115			US-PATENT-3,984,686
		US-PATENT-CLASS-73-432R			US-PATENT-CLASS-325-186			NASA-CASE-MSC-14472-1
		US-PATENT-3,971,256			US-PATENT-CLASS-343-705			US-PATENT-APPL-SN-502138
N76-30793* #	c 52	US-PATENT-APPL-SN-452768			US-PATENT-3,978,410			US-PATENT-CLASS-235-181
		US-PATENT-CLASS-351-23			NASA-CASE-ARC-10592-2			US-PATENT-CLASS-340-146.3P
		US-PATENT-CLASS-351-30			US-PATENT-APPL-SN-414043			US-PATENT-CLASS-340-146.3Q
		US-PATENT-CLASS-351-36			US-PATENT-CLASS-260-240G			US-PATENT-3,984,671
		US-PATENT-RE-28,921			US-PATENT-CLASS-260-566B			NASA-CASE-MFS-22458-1
N76-31365* #	c 31	NASA-CASE-ARC-10445-1			US-PATENT-3,965,096			US-PATENT-APPL-SN-571458
		US-PATENT-APPL-SN-491418			NASA-CASE-NPO-13553-1			US-PATENT-CLASS-136-89
		US-PATENT-CLASS-313-250			US-PATENT-APPL-SN-616333			US-PATENT-CLASS-29-572
		US-PATENT-CLASS-313-306			US-PATENT-CLASS-343-882			US-PATENT-3,984,256
		US-PATENT-CLASS-313-309			US-PATENT-CLASS-343-915			NASA-CASE-NPO-13560-1
		US-PATENT-CLASS-313-338			US-PATENT-3,978,490			NASA-CASE-NPO-13561-1
		US-PATENT-3,978,364			NASA-CASE-ARC-10994-1			US-PATENT-APPL-SN-487156
N76-31372* #	c 32	NASA-CASE-NPO-13465-1			US-PATENT-APPL-SN-728369			US-PATENT-CLASS-123-3
		US-PATENT-APPL-SN-531575			NASA-CASE-LAR-11645-1			US-PATENT-CLASS-23-281
		US-PATENT-CLASS-179-1SA			US-PATENT-APPL-SN-473973			US-PATENT-CLASS-252-373
		US-PATENT-3,978,287			US-PATENT-CLASS-244-113			US-PATENT-CLASS-423-650
N76-31409* #	c 33	NASA-CASE-NPO-12134-1			US-PATENT-CLASS-244-130			US-PATENT-CLASS-431-11
		US-PATENT-APPL-SN-536785			US-PATENT-3,984,070			US-PATENT-CLASS-431-116
		US-PATENT-CLASS-313-94			NASA-CASE-NPO-13528-1			US-PATENT-CLASS-431-162
		US-PATENT-CLASS-357-63			US-PATENT-APPL-SN-521620			US-PATENT-CLASS-431-170
		US-PATENT-3,978,360			US-PATENT-CLASS-73-147			US-PATENT-CLASS-431-41
N76-31489* #	c 35	NASA-CASE-GSC-11893-1			US-PATENT-3,983,749			US-PATENT-CLASS-48-116
		US-PATENT-APPL-SN-585420			NASA-CASE-MFS-20855-1			US-PATENT-CLASS-48-117
		US-PATENT-CLASS-73-9			US-PATENT-APPL-SN-243374			US-PATENT-CLASS-48-197R
		US-PATENT-3,977,231			US-PATENT-CLASS-244-1SD			US-PATENT-CLASS-48-212
N76-31490* #	c 35	NASA-CASE-NPO-13604-1			US-PATENT-3,744,739			US-PATENT-CLASS-48-61
		US-PATENT-APPL-SN-574219			NASA-CASE-MFS-22787-1			US-PATENT-3,982,910
		US-PATENT-CLASS-356-106S			US-PATENT-APPL-SN-511346			NASA-CASE-MFS-23362-1
		US-PATENT-CLASS-356-114			US-PATENT-CLASS-244-169			US-PATENT-APPL-SN-637268
		US-PATENT-CLASS-356-209			US-PATENT-CLASS-244-171			US-PATENT-CLASS-250-338
		US-PATENT-CLASS-356-244			US-PATENT-CLASS-244-3.21			US-PATENT-CLASS-250-339
		US-PATENT-3,977,787			US-PATENT-3,984,072			US-PATENT-CLASS-250-347
N76-31512* #	c 36	NASA-CASE-NPO-13490-1			NASA-CASE-LEW-12082-1			US-PATENT-CLASS-356-106R
		US-PATENT-APPL-SN-549418			US-PATENT-APPL-SN-612964			US-PATENT-3,984,685
		US-PATENT-CLASS-330-4			US-PATENT-CLASS-313-231.4			NASA-CASE-ARC-10855-1
		US-PATENT-CLASS-331-94			US-PATENT-CLASS-313-240			US-PATENT-APPL-SN-617612
		US-PATENT-3,978,417			US-PATENT-CLASS-313-361			US-PATENT-CLASS-128-2H
N76-31524* #	c 37	NASA-CASE-NPO-13535-1			US-PATENT-CLASS-315-111.3			US-PATENT-CLASS-73-343R
		US-PATENT-APPL-SN-563050			US-PATENT-CLASS-60-202			US-PATENT-3,983,753
		US-PATENT-CLASS-264-129			US-PATENT-3,983,695			NASA-CASE-MSC-19442-1
		US-PATENT-CLASS-264-161			NASA-CASE-LAR-11995-1			US-PATENT-APPL-SN-558600
		US-PATENT-CLASS-264-219			US-PATENT-APPL-SN-238826			US-PATENT-CLASS-356-237
		US-PATENT-CLASS-264-304			US-PATENT-CLASS-102-99			US-PATENT-CLASS-356-239
		US-PATENT-CLASS-264-305			US-PATENT-CLASS-264-3R			US-PATENT-3,985,454
		US-PATENT-CLASS-264-308			US-PATENT-CLASS-86-1R			NASA-CASE-LAR-11549-1
		US-PATENT-CLASS-264-310			US-PATENT-3,983,780			US-PATENT-APPL-SN-537979
		US-PATENT-CLASS-264-318			NASA-CASE-NPO-13459-1			US-PATENT-CLASS-219-118
		US-PATENT-CLASS-264-334			US-PATENT-APPL-SN-598967			US-PATENT-CLASS-219-92
		US-PATENT-CLASS-427-230			US-PATENT-CLASS-62-21T			US-PATENT-3,988,561
		US-PATENT-3,978,187			US-PATENT-CLASS-62-51AJT			NASA-CASE-MSC-12506-1
N76-31562* #	c 39	NASA-CASE-MSC-19372-1			US-PATENT-3,983,714			US-PATENT-APPL-SN-545283
		US-PATENT-APPL-SN-517995			NASA-CASE-LAR-11827-1			US-PATENT-CLASS-340-347DD
		US-PATENT-CLASS-182-178			US-PATENT-APPL-SN-412379			US-PATENT-3,988,729
		US-PATENT-CLASS-29-467			US-PATENT-APPL-SN-561764			NASA-CASE-NPO-13543-1
		US-PATENT-CLASS-29-526			US-PATENT-CLASS-178-88			NASA-CASE-NPO-13545-1
		US-PATENT-CLASS-52-236			US-PATENT-CLASS-235-150.1			US-PATENT-APPL-SN-589173
		US-PATENT-CLASS-52-637			US-PATENT-CLASS-235-156			US-PATENT-CLASS-325-41
		US-PATENT-CLASS-52-648			US-PATENT-CLASS-325-323			US-PATENT-CLASS-340-146.1AL
		US-PATENT-CLASS-52-651			US-PATENT-CLASS-325-349			US-PATENT-CLASS-340-146.1AQ
		US-PATENT-CLASS-52-726			US-PATENT-CLASS-325-476			US-PATENT-CLASS-340-146.1AV
		US-PATENT-CLASS-52-745			US-PATENT-3,984,634			US-PATENT-3,988,677
		US-PATENT-CLASS-52-749			NASA-CASE-NPO-13512-1			NASA-CASE-MFS-23062-1
		US-PATENT-3,977,147			US-PATENT-APPL-SN-533734			US-PATENT-APPL-SN-591569
N76-31666* #	c 44	NASA-CASE-NPO-13087-2			US-PATENT-CLASS-321-19			US-PATENT-CLASS-60-527
		US-PATENT-APPL-SN-296622			US-PATENT-CLASS-321-2			US-PATENT-3,987,630
		US-PATENT-APPL-SN-462341			US-PATENT-CLASS-323-DIG.1			NASA-CASE-NPO-13428-1
		US-PATENT-CLASS-136-206			US-PATENT-CLASS-323-17			NASA-CASE-NPO-13447-1

			US-PATENT-APPL-SN-495022				US-PATENT-CLASS-242-204				US-PATENT-CLASS-360-25
			US-PATENT-CLASS-179-158A				US-PATENT-CLASS-242-210				US-PATENT-CLASS-360-31
			US-PATENT-CLASS-328-111				US-PATENT-CLASS-242-57				US-PATENT-4,003,084
			US-PATENT-CLASS-340-172.5				US-PATENT-3,995,789		N77-17464* #	c 37	NASA-CASE-GSC-11978-1
			US-PATENT-3,988,716		N77-14580* #	c 44	NASA-CASE-LEW-11496-1				US-PATENT-APPL-SN-593142
N77-13217* #	c 27		NASA-CASE-NPO-13666-1				US-PATENT-APPL-SN-645508				US-PATENT-CLASS-308-10
			US-PATENT-APPL-SN-633877				US-PATENT-CLASS-136-89				US-PATENT-4,000,929
			US-PATENT-CLASS-29-182.5				US-PATENT-CLASS-204-192		N77-17495* #	c 38	NASA-CASE-GSC-11902-1
			US-PATENT-3,990,880				US-PATENT-3,996,067				US-PATENT-APPL-SN-565289
N77-13315* #	c 33		NASA-CASE-NPO-11515-1		N77-14581* #	c 44	NASA-CASE-LEW-12220-1				US-PATENT-CLASS-235-92CA
			US-PATENT-APPL-SN-139596				US-PATENT-APPL-SN-606891				US-PATENT-CLASS-235-92CT
			US-PATENT-CLASS-307-233				US-PATENT-CLASS-320-2				US-PATENT-CLASS-235-92DN
			US-PATENT-CLASS-307-295				US-PATENT-CLASS-429-23				US-PATENT-CLASS-235-92R
			US-PATENT-CLASS-328-133				US-PATENT-CLASS-429-34				US-PATENT-4,001,552
			US-PATENT-3,750,035				US-PATENT-3,996,064		N77-18154* #	c 07	NASA-CASE-ARC-10761-1
N77-13418* #	c 37		NASA-CASE-ARC-10905-1		N77-14735* #	c 52	NASA-CASE-MFS-23225-1				US-PATENT-APPL-SN-612899
			US-PATENT-APPL-SN-618594				US-PATENT-APPL-SN-612965				US-PATENT-CLASS-137-15.1
			US-PATENT-CLASS-219-300				US-PATENT-CLASS-3-1.2				US-PATENT-CLASS-244-53B
			US-PATENT-CLASS-219-304				US-PATENT-CLASS-3-14				US-PATENT-4,007,891
			US-PATENT-CLASS-239-171				US-PATENT-3,995,324		N77-18307* #	c 32	NASA-CASE-MFS-23303-1
			US-PATENT-CLASS-252-359A		N77-14736* #	c 52	NASA-CASE-ARC-11007-1				US-PATENT-APPL-SN-676957
			US-PATENT-3,990,987				US-PATENT-APPL-SN-652948				US-PATENT-CLASS-333-70R
N77-14025* #	c 07		NASA-CASE-LEW-12419-1				US-PATENT-CLASS-128-2H				US-PATENT-CLASS-333-75
			US-PATENT-APPL-SN-579375				US-PATENT-CLASS-128-379				US-PATENT-CLASS-333-76
			US-PATENT-CLASS-416-153				US-PATENT-CLASS-128-400				US-PATENT-CLASS-333-82B
			US-PATENT-CLASS-416-160				US-PATENT-CLASS-128-402				US-PATENT-4,007,434
			US-PATENT-CLASS-416-162				US-PATENT-3,995,621		N77-18382* #	c 34	NASA-CASE-LAR-10805-2
			US-PATENT-CLASS-416-165		N77-14737* #	c 52	NASA-CASE-MSC-14276-1				US-PATENT-APPL-SN-428992
			US-PATENT-CLASS-416-167				US-PATENT-APPL-SN-557430				US-PATENT-APPL-SN-578240
			US-PATENT-CLASS-60-226R				US-PATENT-CLASS-250-363R				US-PATENT-CLASS-244-117A
			US-PATENT-3,994,128				US-PATENT-CLASS-250-444				US-PATENT-CLASS-427-160
N77-14292* #	c 32		NASA-CASE-LAR-11607-1				US-PATENT-CLASS-250-498				US-PATENT-CLASS-427-322
			US-PATENT-APPL-SN-617895		N77-14738* #	c 52	US-PATENT-3,996,471				US-PATENT-CLASS-428-35
			US-PATENT-CLASS-325-145				NASA-CASE-KSC-10849-1				US-PATENT-CLASS-428-421
			US-PATENT-CLASS-332-22				US-PATENT-APPL-SN-613734				US-PATENT-CLASS-428-461
			US-PATENT-CLASS-332-23R				US-PATENT-CLASS-128-418				US-PATENT-CLASS-428-474
			US-PATENT-3,996,532				US-PATENT-CLASS-3-1.1				US-PATENT-4,008,348
N77-14333* #	c 33		NASA-CASE-GSC-11789-1				US-PATENT-CLASS-339-252R		N77-18417* #	c 35	NASA-CASE-ARC-10898-1
			US-PATENT-APPL-SN-538982				US-PATENT-3,995,644				US-PATENT-APPL-SN-625732
			US-PATENT-CLASS-317-31				NASA-CASE-GSC-11839-1				US-PATENT-CLASS-73-12
			US-PATENT-CLASS-321-13		N77-14751* #	c 60	US-PATENT-APPL-SN-468614				US-PATENT-CLASS-73-4325D
			US-PATENT-3,996,506				US-PATENT-CLASS-235-152				US-PATENT-CLASS-73-71.6
N77-14334* #	c 33		NASA-CASE-GSC-12018-1				US-PATENT-CLASS-250-227				US-PATENT-4,007,823
			US-PATENT-APPL-SN-635531				US-PATENT-CLASS-340-172.5		N77-18891* #	c 73	NASA-CASE-NPO-13121-1
			US-PATENT-CLASS-329-122				US-PATENT-CLASS-350-96R				US-PATENT-APPL-SN-294727
			US-PATENT-CLASS-329-124				US-PATENT-3,996,455				US-PATENT-CLASS-310-4R
			US-PATENT-CLASS-331-23		N77-17029* #	c 05	NASA-CASE-ARC-10807-1				US-PATENT-CLASS-313-311
			US-PATENT-CLASS-331-36C				US-PATENT-APPL-SN-513612				US-PATENT-CLASS-348R
			US-PATENT-CLASS-332-30V				US-PATENT-CLASS-416-104				US-PATENT-4,008,407
			US-PATENT-3,997,848				US-PATENT-CLASS-416-138		N77-18893* #	c 74	NASA-CASE-MSC-14683-1
N77-14335* #	c 33		NASA-CASE-MFS-22560-1				US-PATENT-CLASS-416-141				US-PATENT-APPL-SN-612967
			US-PATENT-APPL-SN-589233				US-PATENT-3,999,886				US-PATENT-CLASS-358-44
			US-PATENT-CLASS-250-214A		N77-17059* #	c 07	NASA-CASE-LEW-12760-1				US-PATENT-4,004,282
			US-PATENT-CLASS-330-14				US-PATENT-APPL-SN-569925		N77-19056* #	c 04	NASA-CASE-LAR-11387-2
			US-PATENT-CLASS-330-28				US-PATENT-CLASS-60-226A				US-PATENT-APPL-SN-531647
			US-PATENT-CLASS-330-59				US-PATENT-CLASS-60-228				US-PATENT-APPL-SN-623156
			US-PATENT-3,996,462				US-PATENT-4,005,574				US-PATENT-CLASS-33-356
N77-14406* #	c 35		NASA-CASE-NPO-13683-1		N77-17143* #	c 20	NASA-CASE-XLA-1349				US-PATENT-CLASS-73-178R
			US-PATENT-APPL-SN-634205				US-PATENT-APPL-SN-256483				US-PATENT-4,006,631
			US-PATENT-CLASS-250-289				US-PATENT-APPL-SN-54552		N77-19076* #	c 09	NASA-CASE-ARC-10979-1
			US-PATENT-CLASS-250-298				US-PATENT-CLASS-102-49.3				US-PATENT-APPL-SN-608483
			US-PATENT-3,996,464				US-PATENT-CLASS-264-3R				US-PATENT-CLASS-124-6
N77-14407* #	c 35		NASA-CASE-LAR-11648-1				US-PATENT-CLASS-86-1R				US-PATENT-CLASS-244-63
			US-PATENT-APPL-SN-645571				US-PATENT-CLASS-86-20R				US-PATENT-3,989,206
			US-PATENT-CLASS-73-133R				US-PATENT-4,000,682		N77-19170* #	c 24	NASA-CASE-LEW-12550-1
			US-PATENT-3,995,476				NASA-CASE-MSC-14428-1				US-PATENT-APPL-SN-598905
N77-14408* #	c 35		NASA-CASE-ARC-10448-3		N77-17161* #	c 23	US-PATENT-APPL-SN-450504				US-PATENT-CLASS-416-224
			US-PATENT-APPL-SN-221670				US-PATENT-CLASS-23-230B				US-PATENT-CLASS-416-230
			US-PATENT-APPL-SN-318848				US-PATENT-CLASS-23-230M				US-PATENT-4,006,999
			US-PATENT-CLASS-250-396				US-PATENT-CLASS-23-230R		N77-19171* #	c 24	NASA-CASE-LEW-12619-1
			US-PATENT-3,996,468				US-PATENT-CLASS-23-231				US-PATENT-APPL-SN-462424
N77-14409* #	c 35		NASA-CASE-NPO-13540-1				US-PATENT-CLASS-23-232C				US-PATENT-CLASS-204-16
			US-PATENT-APPL-SN-526450				US-PATENT-CLASS-23-232R				US-PATENT-CLASS-204-40
			US-PATENT-CLASS-136-232				US-PATENT-CLASS-23-254R				US-PATENT-CLASS-204-9
			US-PATENT-CLASS-136-233				US-PATENT-CLASS-55-197				US-PATENT-CLASS-29-527.2
			US-PATENT-3,996,070				US-PATENT-CLASS-55-67				US-PATENT-3,989,602
N77-14411* #	c 35		NASA-CASE-NPO-13683-1				US-PATENT-CLASS-55-74		N77-19353* #	c 34	NASA-CASE-ARC-10912-1
			US-PATENT-APPL-SN-599284				US-PATENT-CLASS-73-23.1				US-PATENT-APPL-SN-623187
			US-PATENT-CLASS-250-343				US-PATENT-CLASS-73-61.1C				US-PATENT-CLASS-62-100
			US-PATENT-CLASS-356-201				US-PATENT-4,003,257				US-PATENT-CLASS-62-121
			US-PATENT-CLASS-356-204		N77-17351* #	c 33	NASA-CASE-MFS-23181-1				US-PATENT-CLASS-62-269
			US-PATENT-CLASS-356-97				US-PATENT-APPL-SN-566495				US-PATENT-CLASS-62-315
			US-PATENT-3,995,960				US-PATENT-CLASS-331-114				US-PATENT-4,007,601
N77-14477* #	c 37		NASA-CASE-FRC-10081-1				US-PATENT-CLASS-331-177V		N77-19385* #	c 35	NASA-CASE-MSC-14653-1
			US-PATENT-APPL-SN-598504				US-PATENT-CLASS-332-18				US-PATENT-APPL-SN-521816
			US-PATENT-CLASS-280-432				US-PATENT-CLASS-332-30V				US-PATENT-CLASS-177-1
			US-PATENT-3,995,877				US-PATENT-4,003,004				US-PATENT-CLASS-177-208
N77-14478* #	c 37		NASA-CASE-LAR-11658-1		N77-17354* #	c 33	NASA-CASE-LEW-11881-1				US-PATENT-CLASS-73-432R
			US-PATENT-APPL-SN-625759				US-PATENT-APPL-SN-598968				US-PATENT-3,988,933
			US-PATENT-CLASS-83-451				US-PATENT-CLASS-307-229		N77-19416* #	c 36	NASA-CASE-XNP-04167-3
			US-PATENT-CLASS-83-467R				US-PATENT-CLASS-307-230				US-PATENT-APPL-SN-170544
			US-PATENT-3,995,522				US-PATENT-CLASS-328-161				US-PATENT-APPL-SN-479357
N77-14479* #	c 37		NASA-CASE-GSC-11960-1				US-PATENT-4,001,602				US-PATENT-CLASS-331-94.5D
			US-PATENT-APPL-SN-629456		N77-17426* #	c 35	NASA-CASE-MFS-22671-2				US-PATENT-CLASS-331-94.5G
			US-PATENT-CLASS-242-187				US-PATENT-APPL-SN-419831				US-PATENT-CLASS-331-94.5PE
			US-PATENT-CLASS-242-193				US-PATENT-APPL-SN-561956				US-PATENT-4,007,430



N77-19457* #	c 37	NASA-CASE-MFS-15218-1 US-PATENT-APPL-SN-387094 US-PATENT-CLASS-197-188 US-PATENT-CLASS-197-190 US-PATENT-CLASS-3,989,136	US-PATENT-APPL-SN-385059 US-PATENT-CLASS-313-161 US-PATENT-CLASS-313-184 US-PATENT-CLASS-313-224 US-PATENT-CLASS-313-32 US-PATENT-CLASS-315-344 US-PATENT-CLASS-3,881,132	N77-23106* #	c 07	NASA-CASE-LEW-12830-1 US-PATENT-APPL-SN-596641 US-PATENT-APPL-SN-655149 US-PATENT-CLASS-123-122E US-PATENT-CLASS-123-41.33 US-PATENT-CLASS-137-101 US-PATENT-CLASS-415-180 US-PATENT-CLASS-60-39.03 US-PATENT-CLASS-60-39.28R US-PATENT-CLASS-60-39.66 US-PATENT-CLASS-4,020,632		
N77-19458* #	c 37	NASA-CASE-GSC-11883-1 NASA-CASE-GSC-11974-1 NASA-CASE-GSC-11975-1 US-PATENT-APPL-SN-596787 US-PATENT-CLASS-310-4A US-PATENT-CLASS-337-334 US-PATENT-CLASS-340-224 US-PATENT-CLASS-60-527 US-PATENT-CLASS-75-122.7 US-PATENT-CLASS-75-170 US-PATENT-CLASS-4,010,455	N77-21316* #	c 33	NASA-CASE-NPO-10790-1 US-PATENT-APPL-SN-841278 US-PATENT-CLASS-313-175 US-PATENT-CLASS-313-180 US-PATENT-CLASS-313-184 US-PATENT-CLASS-315-108 US-PATENT-CLASS-315-110 US-PATENT-CLASS-3,621,330	N77-23482* #	c 37	NASA-CASE-LAR-11563-1 US-PATENT-APPL-SN-672815 US-PATENT-CLASS-29-DIG.35 US-PATENT-CLASS-29-447 US-PATENT-CLASS-403-273 US-PATENT-CLASS-53-9 US-PATENT-CLASS-4,017,959
N77-19571* #	c 44	NASA-CASE-LEW-11549-1 US-PATENT-APPL-SN-510677 US-PATENT-CLASS-136-89 US-PATENT-CLASS-3,989,541	N77-21392* #	c 35	NASA-CASE-NPO-10711-1 US-PATENT-APPL-SN-844315 US-PATENT-CLASS-179-100.2C US-PATENT-CLASS-3,697,705	N77-23483* #	c 37	NASA-CASE-MFS-23088-1 US-PATENT-APPL-SN-602617 US-PATENT-CLASS-213-81 US-PATENT-CLASS-214-1CM US-PATENT-CLASS-244-161 US-PATENT-CLASS-4,018,409
N77-19760* #	c 60	NASA-CASE-ARC-10899-1 US-PATENT-APPL-SN-576774 US-PATENT-CLASS-178-69.5R US-PATENT-CLASS-179-158S US-PATENT-CLASS-340-172.5 US-PATENT-CLASS-3,990,049	N77-21844* #	c 54	NASA-CASE-MFS-23074-1 US-PATENT-APPL-SN-623188 US-PATENT-CLASS-188-291 US-PATENT-CLASS-254-158 US-PATENT-CLASS-4,018,423	N77-24328* #	c 32	NASA-CASE-ARC-10984-1 US-PATENT-APPL-SN-690815 US-PATENT-CLASS-358-133 US-PATENT-CLASS-358-138 US-PATENT-CLASS-4,025,950
N77-20162* #	c 20	NASA-CASE-LEW-12048-1 US-PATENT-APPL-SN-665033 US-PATENT-CLASS-313-230 US-PATENT-CLASS-313-231.3 US-PATENT-CLASS-313-360 US-PATENT-CLASS-315-111.3 US-PATENT-CLASS-315-111.6 US-PATENT-CLASS-60-202 US-PATENT-CLASS-4,011,719	N77-21941* #	c 74	NASA-CASE-NPO-11429-1 US-PATENT-APPL-SN-95189 US-PATENT-CLASS-240-41.35R US-PATENT-CLASS-240-41R US-PATENT-CLASS-240-46.13 US-PATENT-CLASS-356-236 US-PATENT-CLASS-3,711,701	N77-24331* #	c 32	NASA-CASE-MSC-14840-1 US-PATENT-APPL-SN-692414 US-PATENT-CLASS-178-88 US-PATENT-CLASS-325-346 US-PATENT-CLASS-329-104 US-PATENT-CLASS-329-122 US-PATENT-CLASS-4,027,265
N77-20201* #	c 26	NASA-CASE-LEW-12245-1 US-PATENT-APPL-SN-584094 US-PATENT-CLASS-148-12.7N US-PATENT-CLASS-148-162 US-PATENT-CLASS-148-2 US-PATENT-CLASS-148-20.3 US-PATENT-CLASS-148-32.5 US-PATENT-CLASS-75-170 US-PATENT-CLASS-4,012,237	N77-22386* #	c 33	NASA-CASE-NPO-10870-1 NASA-CASE-NPO-11191-1 NASA-CASE-NPO-11403-1 US-PATENT-APPL-SN-108810 US-PATENT-CLASS-313-146 US-PATENT-CLASS-313-182 US-PATENT-CLASS-313-60 US-PATENT-CLASS-3,736,453	N77-24375* #	c 33	NASA-CASE-MSC-12709-1 US-PATENT-APPL-SN-630583 US-PATENT-CLASS-307-225R US-PATENT-CLASS-328-38 US-PATENT-CLASS-328-39 US-PATENT-CLASS-328-4.8 US-PATENT-CLASS-328-63 US-PATENT-CLASS-4,025,866
N77-20289* #	c 32	NASA-CASE-NPO-13753-1 US-PATENT-APPL-SN-658449 US-PATENT-CLASS-325-4 US-PATENT-CLASS-343-100ST US-PATENT-CLASS-343-6.BR US-PATENT-CLASS-343-6.5R US-PATENT-CLASS-4,012,696	N77-22449* #	c 35	NASA-CASE-LAR-11825-1 US-PATENT-APPL-SN-632112 US-PATENT-CLASS-73-88R US-PATENT-CLASS-4,018,085	N77-24423* #	c 34	NASA-CASE-LAR-12045-1 US-PATENT-APPL-SN-682416 US-PATENT-CLASS-259-4R US-PATENT-CLASS-261-DIG.75 US-PATENT-CLASS-261-123 US-PATENT-CLASS-4,026,527
N77-20399* #	c 35	NASA-CASE-ARC-10716-1 US-PATENT-APPL-SN-403695 US-PATENT-CLASS-235-150.2 US-PATENT-CLASS-235-150.25 US-PATENT-CLASS-244-165 US-PATENT-CLASS-244-171 US-PATENT-CLASS-244-3.21 US-PATENT-CLASS-4,012,018	N77-22450* #	c 35	NASA-CASE-MFS-23281-1 US-PATENT-APPL-SN-657995 US-PATENT-CLASS-73-15.6 US-PATENT-CLASS-73-95 US-PATENT-CLASS-4,018,080	N77-24454* #	c 35	NASA-CASE-ARC-10900-1 US-PATENT-APPL-SN-630579 US-PATENT-CLASS-338-229 US-PATENT-CLASS-338-28 US-PATENT-CLASS-4,025,891
N77-20400* #	c 35	NASA-CASE-ARC-10911-1 US-PATENT-APPL-SN-610802 US-PATENT-CLASS-338-28 US-PATENT-CLASS-73-204 US-PATENT-CLASS-4,011,756	N77-22479* #	c 37	NASA-CASE-NPO-10316-1 US-PATENT-APPL-SN-703107 US-PATENT-CLASS-60-53 US-PATENT-CLASS-3,478,514	N77-24455* #	c 35	NASA-CASE-GSC-12077-1 US-PATENT-APPL-SN-635519 US-PATENT-CLASS-65-108 US-PATENT-CLASS-65-59A US-PATENT-CLASS-65-54 US-PATENT-CLASS-65-64 US-PATENT-CLASS-4,025,327
N77-20401* #	c 35	NASA-CASE-MFS-23267-1 US-PATENT-APPL-SN-653422 US-PATENT-CLASS-126-270 US-PATENT-CLASS-126-271 US-PATENT-CLASS-250-203R US-PATENT-CLASS-4,011,854	N77-22480* #	c 37	NASA-CASE-NPO-13058-1 NASA-CASE-NPO-13096-1 US-PATENT-APPL-SN-403154 US-PATENT-CLASS-214-16.1CB US-PATENT-CLASS-3,896,955	N77-25499* #	c 36	NASA-CASE-GSC-11571-1 US-PATENT-APPL-SN-646704 US-PATENT-CLASS-331-94.5S US-PATENT-CLASS-4,025,875
N77-20882* #	c 74	NASA-CASE-LAR-11782-1 US-PATENT-APPL-SN-608482 US-PATENT-CLASS-350-145 US-PATENT-CLASS-350-174 US-PATENT-CLASS-4,012,123	N77-22482* #	c 37	NASA-CASE-MSC-19536-1 US-PATENT-APPL-SN-658450 US-PATENT-CLASS-74-96 US-PATENT-CLASS-4,018,092	N77-25501* #	c 36	NASA-CASE-ARC-10970-1 US-PATENT-APPL-SN-691046 US-PATENT-CLASS-250-574 US-PATENT-CLASS-350-100 US-PATENT-CLASS-350-102 US-PATENT-CLASS-356-28 US-PATENT-CLASS-4,026,655
N77-21267* #	c 32	NASA-CASE-LAR-11390-1 US-PATENT-APPL-SN-662176 US-PATENT-CLASS-340-5H US-PATENT-CLASS-343-18B US-PATENT-CLASS-343-5CM US-PATENT-CLASS-343-5MM US-PATENT-CLASS-4,019,179	N77-22607* #	c 44	NASA-CASE-LAR-11361-1 US-PATENT-APPL-SN-669928 US-PATENT-CLASS-23-277R US-PATENT-CLASS-23-281 US-PATENT-CLASS-423-648R US-PATENT-CLASS-55-158 US-PATENT-CLASS-4,019,868	N77-25502* #	c 36	NASA-CASE-NPO-13147-1 US-PATENT-APPL-SN-317310 US-PATENT-CLASS-330-4.3 US-PATENT-CLASS-331-94.5D US-PATENT-CLASS-331-94.5P US-PATENT-CLASS-4,027,273
N77-21314* #	c 33	NASA-CASE-NPO-10189-1 NASA-CASE-NPO-10781-1 US-PATENT-APPL-SN-744522 US-PATENT-CLASS-307-232 US-PATENT-CLASS-307-238 US-PATENT-CLASS-307-280 US-PATENT-CLASS-329-119 US-PATENT-CLASS-329-205 US-PATENT-CLASS-332-16 US-PATENT-CLASS-332-30 US-PATENT-CLASS-332-52 US-PATENT-CLASS-3,582,828	N77-22794* #	c 51	NASA-CASE-GSC-12039-1 US-PATENT-APPL-SN-572991 US-PATENT-CLASS-195-103.5K US-PATENT-CLASS-195-103.5R US-PATENT-CLASS-4,014,745	N77-25769* #	c 51	NASA-CASE-LAR-10773-3 US-PATENT-APPL-SN-125235 US-PATENT-APPL-SN-314656 US-PATENT-APPL-SN-623238 US-PATENT-CLASS-195-1.8 US-PATENT-CLASS-4,018,649
N77-21315* #	c 33	NASA-CASE-NPO-11510-1 US-PATENT-APPL-SN-173178	N77-22950* #	c 74	NASA-CASE-ARC-10976-1 US-PATENT-APPL-SN-665032 US-PATENT-CLASS-356-171 US-PATENT-CLASS-4,018,533	N77-25772* #	c 52	NASA-CASE-KSC-11030-1 US-PATENT-APPL-SN-709849 US-PATENT-CLASS-128-1R US-PATENT-CLASS-3-1 US-PATENT-CLASS-339-12R US-PATENT-CLASS-4,025,964
			N77-22951* #	c 74	NASA-CASE-NPO-13722-1 US-PATENT-APPL-SN-616472 US-PATENT-CLASS-250-203R US-PATENT-CLASS-250-211K US-PATENT-CLASS-356-141 US-PATENT-CLASS-356-152 US-PATENT-CLASS-356-172 US-PATENT-CLASS-4,018,532	N77-26385* #	c 33	NASA-CASE-LEW-11978-1 US-PATENT-APPL-SN-708658 US-PATENT-CLASS-204-32A US-PATENT-CLASS-29-597 US-PATENT-CLASS-29-622

		US-PATENT-CLASS-29-628				US-PATENT-CLASS-8-3				US-PATENT-4,039,347
		US-PATENT-CLASS-29-630E				US-PATENT-CLASS-8-84.11				NASA-CASE-GSC-12017-1
		US-PATENT-4,023,266				US-PATENT-4,029,470				US-PATENT-APPL-SN-645510
N77-26386* #	c 33	NASA-CASE-GSC-11824-1	N77-28118* #	c 07	NASA-CASE-LAR-11310-1	US-PATENT-CLASS-325-30				US-PATENT-CLASS-325-42
		US-PATENT-APPL-SN-583486			US-PATENT-APPL-SN-394898	US-PATENT-CLASS-325-473				US-PATENT-CLASS-325-475
		US-PATENT-CLASS-318-138			US-PATENT-CLASS-415-145	US-PATENT-CLASS-325-85				US-PATENT-4,041,391
		US-PATENT-CLASS-318-227			US-PATENT-CLASS-60-226R					NASA-CASE-GSC-11898-1
		US-PATENT-CLASS-318-254			US-PATENT-CLASS-60-263					US-PATENT-APPL-SN-568494
		US-PATENT-4,027,212			US-PATENT-4,033,119					US-PATENT-CLASS-179-15A
N77-26387* #	c 33	NASA-CASE-LAR-11389-1	N77-28225* #	c 24	NASA-CASE-MS-12631-1	US-PATENT-CLASS-179-15P				US-PATENT-4,039,754
		US-PATENT-APPL-SN-229143			US-PATENT-APPL-SN-568541					NASA-CASE-NPO-13812-1
		US-PATENT-APPL-SN-340882			US-PATENT-CLASS-156-229					US-PATENT-APPL-SN-694855
		US-PATENT-CLASS-310-111			US-PATENT-CLASS-244-123					US-PATENT-CLASS-307-64
		US-PATENT-CLASS-310-168			US-PATENT-CLASS-428-141					US-PATENT-CLASS-363-53
		US-PATENT-CLASS-322-96			US-PATENT-CLASS-428-161					US-PATENT-CLASS-363-70
		US-PATENT-3,849,720			US-PATENT-CLASS-428-425					US-PATENT-4,039,925
N77-26477* #	c 36	NASA-CASE-NPO-13550-1			US-PATENT-CLASS-428-457					NASA-CASE-MFS-19287-1
		US-PATENT-APPL-SN-483301			US-PATENT-CLASS-428-458					US-PATENT-APPL-SN-641802
		US-PATENT-CLASS-250-281			US-PATENT-4,032,089					US-PATENT-CLASS-137-207
		US-PATENT-CLASS-250-282			NASA-CASE-LEW-11573-1					US-PATENT-CLASS-137-209
		US-PATENT-CLASS-250-283			US-PATENT-APPL-SN-625733					US-PATENT-CLASS-60-259
		US-PATENT-CLASS-250-423P			US-PATENT-CLASS-228-190					US-PATENT-CLASS-62-55
		US-PATENT-4,031,389			US-PATENT-CLASS-228-194					US-PATENT-4,039,000
N77-26919* #	c 71	NASA-CASE-NPO-13673-1			US-PATENT-CLASS-228-232					NASA-CASE-MFS-23175-1
		US-PATENT-APPL-SN-613004			US-PATENT-4,033,504					US-PATENT-APPL-SN-667928
		US-PATENT-CLASS-330-5.5			NASA-CASE-GSC-12053-1					US-PATENT-CLASS-324-163
		US-PATENT-CLASS-331-107A			US-PATENT-APPL-SN-667930					US-PATENT-CLASS-324-165
		US-PATENT-CLASS-333-72			US-PATENT-CLASS-250-199					US-PATENT-CLASS-324-174
		US-PATENT-4,025,876			US-PATENT-CLASS-250-238					US-PATENT-CLASS-340-271
N77-26942* #	c 74	NASA-CASE-GSC-12058-1			US-PATENT-4,033,882					US-PATENT-CLASS-340-347P
		US-PATENT-APPL-SN-680938			NASA-CASE-LEW-12444-1					US-PATENT-CLASS-340-347S
		US-PATENT-CLASS-250-199			US-PATENT-APPL-SN-583485					US-PATENT-4,039,946
		US-PATENT-4,025,783			US-PATENT-CLASS-123-148CB					NASA-CASE-KSC-11004-1
N77-27116* #	c 07	NASA-CASE-LEW-12608-1			US-PATENT-CLASS-123-148E					US-PATENT-APPL-SN-710032
		US-PATENT-APPL-SN-680067			US-PATENT-CLASS-315-176					US-PATENT-CLASS-3-2
		US-PATENT-CLASS-416-220R			US-PATENT-4,033,316					US-PATENT-CLASS-3-21
		US-PATENT-CLASS-416-221			NASA-CASE-LEW-11158-1					US-PATENT-4,038,705
		US-PATENT-4,033,705			US-PATENT-APPL-SN-663008					NASA-CASE-NPO-11609-2
N77-27131* #	c 09	NASA-CASE-LAR-11883-1			US-PATENT-CLASS-308-5R					US-PATENT-APPL-SN-228229
		US-PATENT-APPL-SN-662175			US-PATENT-CLASS-308-73					US-PATENT-APPL-SN-674700
		US-PATENT-CLASS-73-15R			US-PATENT-CLASS-308-9					US-PATENT-CLASS-210-DIG.27
		US-PATENT-4,027,524			US-PATENT-4,035,037					US-PATENT-CLASS-210-40
N77-27187* #	c 24	NASA-CASE-MFS-22926-1			NASA-CASE-MS-14905-1					US-PATENT-CLASS-260-2.5A
		US-PATENT-APPL-SN-557565			US-PATENT-APPL-SN-708795					US-PATENT-CLASS-260-2.5AM
		US-PATENT-CLASS-184-60			US-PATENT-CLASS-128-DIG.12					US-PATENT-CLASS-260-2.5AY
		US-PATENT-CLASS-75-135			US-PATENT-CLASS-128-214F					US-PATENT-CLASS-260-77.5AP
		US-PATENT-CLASS-75-139			US-PATENT-CLASS-222-61					US-PATENT-4,039-489
		US-PATENT-CLASS-75-65R			US-PATENT-CLASS-222-95					NASA-CASE-GSC-12075-1
		US-PATENT-4,026,500			US-PATENT-4,033,479					US-PATENT-APPL-SN-562499
N77-27188* #	c 24	NASA-CASE-LEW-12118-1			NASA-CASE-MFS-23299-1					US-PATENT-CLASS-343-17.7
		US-PATENT-APPL-SN-616332			US-PATENT-APPL-SN-700673					US-PATENT-4,042,926
		US-PATENT-CLASS-428-301			US-PATENT-CLASS-73-67.7					NASA-CASE-ARC-10897-1
		US-PATENT-CLASS-428-328			US-PATENT-CLASS-73-88R					US-PATENT-APPL-SN-625781
		US-PATENT-CLASS-428-368			US-PATENT-4,033,182					US-PATENT-CLASS-323-93
		US-PATENT-CLASS-428-418			NASA-CASE-LEW-12258-1					US-PATENT-CLASS-324-60
		US-PATENT-CLASS-428-457			US-PATENT-APPL-SN-676433					US-PATENT-CLASS-340-200
		US-PATENT-CLASS-428-902			US-PATENT-CLASS-128-1R					US-PATENT-CLASS-340-347SH
		US-PATENT-CLASS-428-911			US-PATENT-CLASS-128-303R					US-PATENT-4,040,041
		US-PATENT-4,029,838			US-PATENT-4,033,349					NASA-CASE-MFS-23118-1
N77-27345* #	c 34	NASA-CASE-ARC-10974-1			NASA-CASE-MS-14623-1					US-PATENT-APPL-SN-691256
		US-PATENT-APPL-SN-667010			US-PATENT-APPL-SN-637269					US-PATENT-CLASS-356-212
		US-PATENT-CLASS-73-189			US-PATENT-CLASS-128-DIG.4					US-PATENT-4,040,750
		US-PATENT-CLASS-73-228			US-PATENT-CLASS-128-2.1E					NASA-CASE-NPO-13671-1
		US-PATENT-4,026,939			US-PATENT-CLASS-128-410					US-PATENT-APPL-SN-564622
N77-27366* #	c 35	NASA-CASE-GSC-12059-1			US-PATENT-4,033,334					US-PATENT-CLASS-123-DIG.8
		US-PATENT-APPL-SN-680957			NASA-CASE-GSC-11989-1					US-PATENT-CLASS-123-119A
		US-PATENT-CLASS-331-94.5D			US-PATENT-APPL-SN-645500					US-PATENT-CLASS-123-122AB
		US-PATENT-CLASS-331-94.5T			US-PATENT-CLASS-350-162SF					US-PATENT-CLASS-123-37
		US-PATENT-CLASS-350-253			US-PATENT-CLASS-350-202					US-PATENT-CLASS-123-59E
		US-PATENT-4,030,047			US-PATENT-CLASS-350-299					US-PATENT-4,041,910
N77-27367* #	c 35	NASA-CASE-NPO-11103-1			US-PATENT-4,035,062					NASA-CASE-LEW-12567-1
		US-PATENT-APPL-SN-3654			NASA-CASE-NPO-13707-1					US-PATENT-APPL-SN-717319
		US-PATENT-CLASS-73-84			US-PATENT-APPL-SN-617202					US-PATENT-CLASS-136-89AC
		US-PATENT-3,623,359			US-PATENT-CLASS-350-288					US-PATENT-CLASS-136-89P
N77-27368* #	c 35	NASA-CASE-MS-12327-1			US-PATENT-CLASS-350-310					US-PATENT-CLASS-52-173R
		US-PATENT-APPL-SN-19572			US-PATENT-CLASS-350-320					US-PATENT-CLASS-52-61
		US-PATENT-CLASS-73-362AR			US-PATENT-4,035,065					US-PATENT-4,040,867
		US-PATENT-3,613,454			NASA-CASE-MFS-23405-1					NASA-CASE-LEW-12312-1
N77-27400* #	c 37	NASA-CASE-GSC-11063-1			US-PATENT-APPL-SN-718267					US-PATENT-APPL-SN-654787
		US-PATENT-APPL-SN-41431			US-PATENT-CLASS-228-124					US-PATENT-CLASS-416-135
		US-PATENT-CLASS-318-267			US-PATENT-CLASS-228-263					US-PATENT-CLASS-416-190
		US-PATENT-CLASS-318-468			US-PATENT-4,033,503					US-PATENT-CLASS-416-193A
		US-PATENT-CLASS-318-470			NASA-CASE-NPO-13620-1					US-PATENT-CLASS-416-241A
		US-PATENT-CLASS-318-675			US-PATENT-APPL-SN-666992					US-PATENT-4,045,149
		US-PATENT-3,628,113			US-PATENT-CLASS-210-24					NASA-CASE-NPO-13566-1
N77-27677* #	c 51	NASA-CASE-LAR-11649-1			US-PATENT-CLASS-536-105					US-PATENT-APPL-SN-653316
		US-PATENT-APPL-SN-626942			US-PATENT-CLASS-536-56					US-PATENT-CLASS-204-DIG.11
		US-PATENT-CLASS-118-313			US-PATENT-CLASS-536-58					US-PATENT-CLASS-204-157R
		US-PATENT-CLASS-118-6			US-PATENT-CLASS-536-64					US-PATENT-CLASS-204-158R
		US-PATENT-CLASS-118-9			US-PATENT-4,041,233					US-PATENT-CLASS-204-162R
		US-PATENT-CLASS-23-253A			NASA-CASE-MFS-23345-1					US-PATENT-CLASS-250-527
		US-PATENT-CLASS-23-259			US-PATENT-APPL-SN-696989					US-PATENT-4,045,359
		US-PATENT-CLASS-23-292			US-PATENT-CLASS-106-292					
		US-PATENT-CLASS-424-3			US-PATENT-CLASS-106-296					
		US-PATENT-CLASS-427-4			US-PATENT-CLASS-106-299					

N77-32279* #	c 26	NASA-CASE-LEW-12906-1 US-PATENT-APPL-SN-691936 US-PATENT-CLASS-148-32 US-PATENT-CLASS-75-170 US-PATENT-4,045,255	N77-32731* #	c 80	NASA-CASE-GSC-11839-3 US-PATENT-APPL-SN-468614 US-PATENT-APPL-SN-657997 US-PATENT-CLASS-250-199 US-PATENT-CLASS-340-347AD US-PATENT-CLASS-350-96R US-PATENT-4,045,792	N78-10686* #	c 52	NASA-CASE-ARC-10916-1 US-PATENT-APPL-SN-701448 US-PATENT-CLASS-3-1.2 US-PATENT-CLASS-3-15 US-PATENT-CLASS-3-29 US-PATENT-4,051,558
N77-32280* #	c 26	NASA-CASE-LEW-12270-1 US-PATENT-APPL-SN-6845507 US-PATENT-CLASS-148-32.5 US-PATENT-CLASS-75-170 US-PATENT-4,046,560	N77-32919* #	c 76	NASA-CASE-MFS-23001-1 US-PATENT-APPL-SN-610801 US-PATENT-CLASS-156-DIG.62 US-PATENT-CLASS-156-601 US-PATENT-CLASS-156-619 US-PATENT-CLASS-156-620 US-PATENT-4,046,617	N78-10709* #	c 60	NASA-CASE-GSC-11839-2 US-PATENT-APPL-SN-468614 US-PATENT-APPL-SN-657996 US-PATENT-CLASS-340-173LM US-PATENT-CLASS-350-96R US-PATENT-CLASS-356-169 US-PATENT-4,052,705
N77-32308* #	c 27	NASA-CASE-GSC-12110-1 US-PATENT-APPL-SN-682435 US-PATENT-CLASS-156-645 US-PATENT-CLASS-156-663 US-PATENT-4,046,619	N78-10214* #	c 24	NASA-CASE-LAR-11898-1 US-PATENT-APPL-SN-723264 US-PATENT-CLASS-428-116 US-PATENT-CLASS-428-138 US-PATENT-CLASS-428-73 US-PATENT-CLASS-428-902 US-PATENT-4,052,523	N78-10837* #	c 71	NASA-CASE-NPO-13802-1 US-PATENT-APPL-SN-658133 US-PATENT-CLASS-264-23 US-PATENT-CLASS-264-345 US-PATENT-CLASS-65-DIG.4 US-PATENT-CLASS-65-DIG.7 US-PATENT-CLASS-65-102 US-PATENT-CLASS-65-2 US-PATENT-CLASS-65-32 US-PATENT-CLASS-65-4B US-PATENT-CLASS-65-87 US-PATENT-CLASS-73-505 US-PATENT-4,052,181
N77-32342* #	c 32	NASA-CASE-NPO-13587-1 US-PATENT-APPL-SN-589119 US-PATENT-CLASS-343-10 US-PATENT-CLASS-343-100CL US-PATENT-CLASS-343-5CM US-PATENT-CLASS-343-5DP US-PATENT-4,045,795	N78-10224* #	c 25	NASA-CASE-LEW-12137-1 US-PATENT-APPL-SN-672210 US-PATENT-CLASS-165-105 US-PATENT-CLASS-431-158 US-PATENT-CLASS-431-352 US-PATENT-CLASS-60-39.51R US-PATENT-4,052,144	N78-12390* #	c 35	NASA-CASE-MSC-14773-1 US-PATENT-APPL-SN-612966 US-PATENT-CLASS-137-177 US-PATENT-CLASS-210-222 US-PATENT-CLASS-55-100 US-PATENT-CLASS-55-26-9 US-PATENT-CLASS-55-3 US-PATENT-CLASS-62-50 US-PATENT-CLASS-62-514R US-PATENT-4,027,494
N77-32413* #	c 34	NASA-CASE-GSC-11998-1 US-PATENT-APPL-SN-579989 US-PATENT-CLASS-165-105 US-PATENT-4,046,190	N78-10375* #	c 33	NASA-CASE-MSC-14916-1 US-PATENT-APPL-SN-739914 US-PATENT-CLASS-179-107R US-PATENT-CLASS-179-175.1A US-PATENT-CLASS-330-2 US-PATENT-4,049,930	N78-13320* #	c 33	NASA-CASE-MFS-23274-1 US-PATENT-APPL-SN-714158 US-PATENT-CLASS-307-306 US-PATENT-CLASS-338-32S US-PATENT-CLASS-357-4 US-PATENT-CLASS-357-5 US-PATENT-CLASS-357-73 US-PATENT-4,055,847
N77-32454* #	c 35	NASA-CASE-LEW-12050-1 US-PATENT-APPL-SN-629457 US-PATENT-CLASS-136-202 US-PATENT-CLASS-136-236R US-PATENT-CLASS-136-240 US-PATENT-4,045,247	N78-10376* #	c 33	NASA-CASE-MFS-23280-1 US-PATENT-APPL-SN-706425 US-PATENT-CLASS-318-200 US-PATENT-CLASS-318-227 US-PATENT-CLASS-318-230 US-PATENT-4,052,648	N78-13400* #	c 35	NASA-CASE-ARC-10639-1 US-PATENT-APPL-SN-643043 US-PATENT-CLASS-250-336 US-PATENT-CLASS-250-343 US-PATENT-CLASS-250-351 US-PATENT-4,055,764
N77-32455* #	c 35	NASA-CASE-NPO-13792-1 US-PATENT-APPL-SN-677351 US-PATENT-CLASS-324-57H US-PATENT-CLASS-324-59 US-PATENT-4,045,728	N78-10377* #	c 33	NASA-CASE-NPO-13872-1 US-PATENT-APPL-SN-742034 US-PATENT-CLASS-363-57 US-PATENT-CLASS-363-89 US-PATENT-4,052,659	N78-13436* #	c 37	NASA-CASE-LEW-12083-1 US-PATENT-APPL-SN-659882 US-PATENT-CLASS-250-499 US-PATENT-CLASS-313-61S US-PATENT-CLASS-427-124 US-PATENT-CLASS-427-126 US-PATENT-CLASS-427-248E US-PATENT-CLASS-427-250 US-PATENT-CLASS-427-255 US-PATENT-4,055,686
N77-32456* #	c 35	NASA-CASE-GSC-12143-1 US-PATENT-APPL-SN-743249 US-PATENT-CLASS-250-288 US-PATENT-CLASS-73-421.5R US-PATENT-4,046,012	N78-10428* #	c 35	NASA-CASE-MSC-14757-1 US-PATENT-APPL-SN-625734 US-PATENT-CLASS-141-197 US-PATENT-CLASS-141-4 US-PATENT-CLASS-417-225 US-PATENT-CLASS-60-560 US-PATENT-CLASS-60-574 US-PATENT-4,051,877	N78-13526* #	c 44	NASA-CASE-NPO-13482-1 US-PATENT-APPL-SN-495021 US-PATENT-CLASS-136-89SJ US-PATENT-CLASS-357-15 US-PATENT-CLASS-357-16 US-PATENT-CLASS-357-30 US-PATENT-4,053,918
N77-32478* #	c 36	NASA-CASE-LEW-12164-1 US-PATENT-APPL-SN-511334 US-PATENT-CLASS-350-162SF US-PATENT-4,043,674	N78-10429* #	c 35	NASA-CASE-NPO-13772-1 US-PATENT-APPL-SN-675351 US-PATENT-CLASS-250-310 US-PATENT-CLASS-250-398 US-PATENT-4,052,614	N78-13874* #	c 74	NASA-CASE-GSC-12088-1 US-PATENT-APPL-SN-648700 US-PATENT-CLASS-356-103 US-PATENT-CLASS-356-104 US-PATENT-4,053,229
N77-32499* #	c 37	NASA-CASE-MSC-19535-1 US-PATENT-APPL-SN-641784 US-PATENT-CLASS-292-110 US-PATENT-4,045,063	N78-10467* #	c 37	NASA-CASE-LEW-12321-1 US-PATENT-APPL-SN-596641 US-PATENT-CLASS-123-122E US-PATENT-CLASS-123-41.33 US-PATENT-CLASS-137-104 US-PATENT-CLASS-415-180 US-PATENT-CLASS-60-39.28R US-PATENT-CLASS-60-39.66 US-PATENT-4,041,897	N78-14096* #	c 24	NASA-CASE-ARC-11042-1 US-PATENT-APPL-SN-734902 US-PATENT-CLASS-252-8.1 US-PATENT-CLASS-60-836 US-PATENT-4,061,579
N77-32500* #	c 37	NASA-CASE-LEW-12527-1 US-PATENT-APPL-SN-595747 US-PATENT-CLASS-290-52 US-PATENT-CLASS-308-195 US-PATENT-CLASS-308-72 US-PATENT-4,046,434	N78-10468* #	c 37	NASA-CASE-LEW-12313-1 US-PATENT-APPL-SN-581751 US-PATENT-CLASS-416-135 US-PATENT-CLASS-416-141 US-PATENT-CLASS-416-220R US-PATENT-CLASS-416-248 US-PATENT-4,047,840	N78-14104* #	c 25	NASA-CASE-ARC-10991-1 US-PATENT-APPL-SN-744574 US-PATENT-CLASS-204-180G US-PATENT-CLASS-204-299R US-PATENT-4,061,561
N77-32501* #	c 37	NASA-CASE-LEW-12477-1 US-PATENT-APPL-SN-595745 US-PATENT-CLASS-290-52 US-PATENT-CLASS-308-195 US-PATENT-4,046,435	N78-10493* #	c 39	NASA-CASE-NPO-13731-1 US-PATENT-APPL-SN-653682 US-PATENT-CLASS-73-15.6 US-PATENT-CLASS-73-91 US-PATENT-4,030,348	N78-14164* #	c 27	NASA-CASE-NPO-13867-1 US-PATENT-APPL-SN-692284 US-PATENT-CLASS-260-DIG.15 US-PATENT-CLASS-427-164 US-PATENT-CLASS-428-411 US-PATENT-CLASS-428-522 US-PATENT-CLASS-428-922 US-PATENT-CLASS-96-87A
N77-32580* #	c 44	NASA-CASE-NPO-13675-1 US-PATENT-APPL-SN-658132 US-PATENT-CLASS-204-157.1R US-PATENT-CLASS-250-527 US-PATENT-4,045,315	N78-10529* #	c 43	NASA-CASE-GSC-11976-1 US-PATENT-APPL-SN-677352 US-PATENT-CLASS-324-58.5B US-PATENT-4,052,666			
N77-32581* #	c 44	NASA-CASE-NPO-13510-1 US-PATENT-APPL-SN-536786 US-PATENT-CLASS-126-263 US-PATENT-CLASS-165-107 US-PATENT-CLASS-165-2 US-PATENT-CLASS-62-4 US-PATENT-4,044,821	N78-10554* #	c 44	NASA-CASE-NPO-13734-1			
N77-32582* #	c 44	NASA-CASE-NPO-13810-1 US-PATENT-APPL-SN-681096 US-PATENT-CLASS-126-270 US-PATENT-CLASS-126-271 US-PATENT-CLASS-52-117 US-PATENT-CLASS-60-841 US-PATENT-4,044,753						
N77-32583* #	c 44	NASA-CASE-NPO-13736-1 US-PATENT-APPL-SN-681017 US-PATENT-CLASS-350-295 US-PATENT-CLASS-350-320 US-PATENT-CLASS-427-130 US-PATENT-CLASS-427-47 US-PATENT-CLASS-52-2 US-PATENT-4,046,462						
N77-32721* #	c 54	NASA-CASE-ARC-10756-1 US-PATENT-APPL-SN-436313 US-PATENT-CLASS-2-2.1A US-PATENT-CLASS-214-1BC US-PATENT-CLASS-214-1CM US-PATENT-4,046,262						
N77-32722* #	c 54	NASA-CASE-MSC-14771-1 US-PATENT-APPL-SN-688854						

- N78-14384\* # c 35 ..... US-PATENT-4,061,834  
NASA-CASE-ARC-11046-1  
US-PATENT-APPL-SN-712419  
US-PATENT-CLASS-340-27SS  
US-PATENT-CLASS-73-180  
US-PATENT-4,061,029
- N78-14380\* # c 36 ..... NASA-CASE-MFS-19259-1  
US-PATENT-APPL-SN-732630  
US-PATENT-CLASS-250-571  
US-PATENT-CLASS-356-159  
US-PATENT-CLASS-356-160  
US-PATENT-CLASS-356-199  
US-PATENT-4,061,427
- N78-14452\* # c 43 ..... NASA-CASE-LEW-12217-1  
US-PATENT-APPL-SN-783753  
US-PATENT-CLASS-166-248  
US-PATENT-CLASS-166-259  
US-PATENT-4,061,190
- N78-14625\* # c 44 ..... NASA-CASE-LEW-12039-1  
US-PATENT-APPL-SN-687822  
US-PATENT-CLASS-320-15  
US-PATENT-CLASS-320-18  
US-PATENT-CLASS-320-40  
US-PATENT-CLASS-320-6  
US-PATENT-4,061,955
- N78-14773\* # c 52 ..... NASA-CASE-LEW-12668-1  
US-PATENT-APPL-SN-677353  
US-PATENT-CLASS-128-305  
US-PATENT-4,061,146
- N78-14784\* # c 54 ..... NASA-CASE-MSC-14632-1  
US-PATENT-APPL-SN-571459  
US-PATENT-CLASS-204-180P  
US-PATENT-CLASS-204-301  
US-PATENT-CLASS-210-192  
US-PATENT-CLASS-210-96M  
US-PATENT-CLASS-23-253A  
US-PATENT-4,061,570
- N78-14867\* # c 71 ..... NASA-CASE-LAR-12106-1  
US-PATENT-APPL-SN-740156  
US-PATENT-CLASS-330-52  
US-PATENT-CLASS-73-646  
US-PATENT-4,061,041
- N78-14889\* # c 74 ..... NASA-CASE-KSC-11047-1  
US-PATENT-APPL-SN-715485  
US-PATENT-CLASS-179-91R  
US-PATENT-CLASS-250-199  
US-PATENT-CLASS-358-142  
US-PATENT-4,061,577
- N78-15180\* # c 24 ..... NASA-CASE-ARC-10913-1  
US-PATENT-APPL-SN-698648  
US-PATENT-CLASS-106-15FP  
US-PATENT-CLASS-260-2.5N  
US-PATENT-CLASS-260-2.5R  
US-PATENT-CLASS-428-117  
US-PATENT-CLASS-428-290  
US-PATENT-CLASS-428-71  
US-PATENT-CLASS-428-73  
US-PATENT-CLASS-428-920  
US-PATENT-4,061,812
- N78-15210\* # c 25 ..... NASA-CASE-LAR-12046-1  
US-PATENT-APPL-SN-755310  
US-PATENT-CLASS-23-230PC  
US-PATENT-CLASS-23-232E  
US-PATENT-CLASS-23-232R  
US-PATENT-CLASS-73-23  
US-PATENT-4,062,650
- N78-15276\* # c 27 ..... NASA-CASE-LEW-12053-1  
US-PATENT-APPL-SN-513613  
US-PATENT-CLASS-260-2R  
US-PATENT-CLASS-526-193  
US-PATENT-CLASS-526-225  
US-PATENT-CLASS-544-193  
US-PATENT-4,061,856
- N78-15323\* # c 32 ..... NASA-CASE-NPO-13836-1  
US-PATENT-APPL-SN-699002  
US-PATENT-CLASS-178-69.1  
US-PATENT-CLASS-325-58  
US-PATENT-CLASS-325-63  
US-PATENT-CLASS-343-179  
US-PATENT-4,061,974
- N78-15461\* # c 35 ..... NASA-CASE-NPO-13808-1  
US-PATENT-APPL-SN-675328  
US-PATENT-CLASS-250-322  
US-PATENT-CLASS-250-416TV  
US-PATENT-4,063,092
- N78-15512\* # c 39 ..... NASA-CASE-LAR-12016-1  
US-PATENT-APPL-SN-754066  
US-PATENT-CLASS-73-579  
US-PATENT-CLASS-73-630  
US-PATENT-CLASS-73-88F  
US-PATENT-4,062,227
- N78-15560\* # c 44 ..... NASA-CASE-LAR-12009-1  
US-PATENT-APPL-SN-717320  
US-PATENT-CLASS-126-270  
US-PATENT-CLASS-126-400  
US-PATENT-CLASS-237-1A
- N78-15879\* # c 74 ..... US-PATENT-4,062,347  
NASA-CASE-LAR-10385-3  
US-PATENT-APPL-SN-370999  
US-PATENT-APPL-SN-38816  
US-PATENT-CLASS-350-1  
US-PATENT-CLASS-428-334  
US-PATENT-CLASS-428-336  
US-PATENT-CLASS-428-426  
US-PATENT-CLASS-428-428  
US-PATENT-4,062,996
- N78-15880\* # c 74 ..... NASA-CASE-MFS-22409-2  
US-PATENT-APPL-SN-445398  
US-PATENT-APPL-SN-636193  
US-PATENT-CLASS-250-272  
US-PATENT-CLASS-250-320  
US-PATENT-4,063,068
- N78-16369\* # c 37 ..... NASA-CASE-NPO-13619-1  
US-PATENT-APPL-SN-572990  
US-PATENT-CLASS-185-38  
US-PATENT-CLASS-74-81  
US-PATENT-CLASS-74-83  
US-PATENT-4,062,245
- N78-16387\* # c 39 ..... NASA-CASE-LAR-11490-1  
US-PATENT-APPL-SN-707125  
US-PATENT-CLASS-358-106  
US-PATENT-4,063,282
- N78-17031\* # c 04 ..... NASA-CASE-XNP-01458  
US-PATENT-APPL-SN-160093  
US-PATENT-CLASS-235-70  
US-PATENT-3,229,905
- N78-17055\* # c 07 ..... NASA-CASE-LEW-12317-1  
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US-PATENT-CLASS-60-204  
US-PATENT-CLASS-60-226R  
US-PATENT-CLASS-60-271  
US-PATENT-4,068,469
- N78-17056\* # c 07 ..... NASA-CASE-LEW-12390-1  
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US-PATENT-CLASS-60-226R  
US-PATENT-CLASS-74-385  
US-PATENT-CLASS-74-417  
US-PATENT-4,068,470
- N78-17140\* # c 17 ..... NASA-CASE-HQN-10880-1  
US-PATENT-APPL-SN-595254  
US-PATENT-CLASS-325-118  
US-PATENT-CLASS-325-66  
US-PATENT-CLASS-343-112R  
US-PATENT-CLASS-343-225  
US-PATENT-CLASS-362-269  
US-PATENT-4,067,015
- N78-17149\* # c 24 ..... NASA-CASE-LAR-11898-2  
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US-PATENT-APPL-SN-799024  
US-PATENT-CLASS-156-245  
US-PATENT-CLASS-156-285  
US-PATENT-CLASS-156-289  
US-PATENT-CLASS-428-116  
US-PATENT-CLASS-428-902  
US-PATENT-4,063,981
- N78-17150\* # c 24 ..... NASA-CASE-LAR-12019-1  
US-PATENT-APPL-SN-792087  
US-PATENT-CLASS-156-154  
US-PATENT-CLASS-156-264  
US-PATENT-CLASS-156-285  
US-PATENT-CLASS-156-286  
US-PATENT-CLASS-156-289  
US-PATENT-CLASS-156-300  
US-PATENT-CLASS-156-306  
US-PATENT-CLASS-156-311  
US-PATENT-CLASS-264-157  
US-PATENT-CLASS-264-80  
US-PATENT-CLASS-428-294  
US-PATENT-CLASS-428-302  
US-PATENT-4,065,340
- N78-17205\* # c 27 ..... NASA-CASE-LAR-12181-1  
US-PATENT-APPL-SN-532784  
US-PATENT-APPL-SN-734901  
US-PATENT-CLASS-156-309  
US-PATENT-CLASS-156-331  
US-PATENT-CLASS-260-30.4N  
US-PATENT-CLASS-260-32.2R  
US-PATENT-CLASS-260-32.6NT  
US-PATENT-CLASS-260-33.4R  
US-PATENT-4,065,345
- N78-17206\* # c 27 ..... NASA-CASE-LAR-11902-1  
US-PATENT-APPL-SN-672695  
US-PATENT-CLASS-106-43  
US-PATENT-CLASS-60-200A  
US-PATENT-CLASS-75-229  
US-PATENT-CLASS-75-239  
US-PATENT-CLASS-75-241  
US-PATENT-4,067,742
- N78-17213\* # c 27 ..... NASA-CASE-MSC-14331-2  
US-PATENT-APPL-SN-657907  
US-PATENT-CLASS-260-75NH  
US-PATENT-CLASS-260-75NK
- N78-17214\* # c 27 ..... US-PATENT-CLASS-260-75NT  
US-PATENT-CLASS-260-77.5AM  
US-PATENT-CLASS-260-77.5AN  
US-PATENT-CLASS-260-77.5AP  
US-PATENT-CLASS-260-77.5AT  
US-PATENT-CLASS-260-77.55P  
US-PATENT-4,069,212
- N78-17215\* # c 27 ..... NASA-CASE-NPO-10557  
US-PATENT-APPL-SN-759220  
US-PATENT-CLASS-260-67  
US-PATENT-3,538,053
- N78-17215\* # c 27 ..... NASA-CASE-NPO-13764-1  
US-PATENT-APPL-SN-674194  
US-PATENT-CLASS-128-92C  
US-PATENT-CLASS-128-92G  
US-PATENT-CLASS-260-42.17  
US-PATENT-CLASS-3-1.9  
US-PATENT-4,064,566
- N78-17237\* # c 31 ..... NASA-CASE-LEW-11981-1  
US-PATENT-APPL-SN-672220  
US-PATENT-CLASS-313-22  
US-PATENT-CLASS-62-376  
US-PATENT-CLASS-62-514R  
US-PATENT-4,068,495
- N78-17238\* # c 31 ..... NASA-CASE-NPO-11978  
US-PATENT-APPL-SN-264268  
US-PATENT-CLASS-313-175  
US-PATENT-CLASS-313-176  
US-PATENT-CLASS-313-180  
US-PATENT-CLASS-313-184  
US-PATENT-CLASS-313-224  
US-PATENT-3,769,544
- N78-17293\* # c 33 ..... NASA-CASE-XLE-06094  
US-PATENT-APPL-SN-523632  
US-PATENT-CLASS-315-22  
US-PATENT-3,423,627
- N78-17294\* # c 33 ..... NASA-CASE-MSC-11235  
US-PATENT-APPL-SN-698239  
US-PATENT-CLASS-307-270  
US-PATENT-CLASS-307-297  
US-PATENT-CLASS-323-4  
US-PATENT-CLASS-328-172  
US-PATENT-3,573,504
- N78-17295\* # c 33 ..... NASA-CASE-XGS-09186  
US-PATENT-APPL-SN-669911  
US-PATENT-CLASS-323-18  
US-PATENT-3,475,675
- N78-17296\* # c 33 ..... NASA-CASE-GSC-10135  
US-PATENT-APPL-SN-764823  
US-PATENT-CLASS-307-53  
US-PATENT-CLASS-320-53  
US-PATENT-CLASS-323-19  
US-PATENT-3,600,599
- N78-17335\* # c 34 ..... NASA-CASE-LEW-12508-1  
US-PATENT-APPL-SN-746580  
US-PATENT-CLASS-82-3  
US-PATENT-4,069,028
- N78-17336\* # c 34 ..... NASA-CASE-ARC-10188  
US-PATENT-APPL-SN-42088  
US-PATENT-CLASS-165-105  
US-PATENT-CLASS-165-134  
US-PATENT-3,777,811
- N78-17337\* # c 34 ..... NASA-CASE-ARC-10189  
US-PATENT-APPL-SN-824628  
US-PATENT-CLASS-165-105  
US-PATENT-CLASS-165-32  
US-PATENT-CLASS-165-96  
US-PATENT-CLASS-2-2.1  
US-PATENT-3,543,839
- N78-17357\* # c 35 ..... NASA-CASE-MFS-23194-1  
US-PATENT-APPL-SN-629458  
US-PATENT-CLASS-350-3.5  
US-PATENT-4,065,202
- N78-17358\* # c 35 ..... NASA-CASE-MSC-11242  
US-PATENT-APPL-SN-636796  
US-PATENT-CLASS-73-67.2  
US-PATENT-3,492,858
- N78-17359\* # c 35 ..... NASA-CASE-NPO-11150  
US-PATENT-APPL-SN-858950  
US-PATENT-CLASS-338-100  
US-PATENT-CLASS-338-36  
US-PATENT-CLASS-338-99  
US-PATENT-3,641,470
- N78-17366\* # c 36 ..... NASA-CASE-MFS-22597  
US-PATENT-APPL-SN-395895  
US-PATENT-CLASS-315-108  
US-PATENT-CLASS-331-94.5G  
US-PATENT-CLASS-331-94.5T  
US-PATENT-3,882,417
- N78-17383\* # c 37 ..... NASA-CASE-MSC-19666-1  
US-PATENT-APPL-SN-721150  
US-PATENT-CLASS-118-50  
US-PATENT-CLASS-118-500  
US-PATENT-CLASS-248-36.3  
US-PATENT-CLASS-269-21

N78-17384* #	c 37	US-PATENT-CLASS-279-3	US-PATENT-CLASS-244-53A	US-PATENT-CLASS-428-667
		US-PATENT-CLASS-51-235	US-PATENT-CLASS-244-54	US-PATENT-CLASS-428-679
N78-17384* #	c 37	US-PATENT-4,066,039	US-PATENT-CLASS-60-226R	US-PATENT-4,055,707
		NASA-CASE-LEW-12916-1	US-PATENT-CLASS-60-39.31	NASA-CASE-HON-10841-1
N78-17385* #	c 37	US-PATENT-APPL-SN-583056	US-PATENT-4,055,041	US-PATENT-APPL-SN-560891
		US-PATENT-CLASS-60-261	NASA-CASE-LEW-12917-1	US-PATENT-CLASS-176-39
N78-17385* #	c 37	US-PATENT-CLASS-60-262	US-PATENT-APPL-SN-583055	US-PATENT-CLASS-330-4.3
		US-PATENT-CLASS-60-271	US-PATENT-CLASS-60-204	US-PATENT-4,075,057
N78-17386* #	c 37	US-PATENT-4,064,692	US-PATENT-CLASS-60-262	NASA-CASE-LAR-12018-1
		NASA-CASE-WOO-00625	US-PATENT-4,069,661	US-PATENT-APPL-SN-678520
N78-17386* #	c 37	US-PATENT-APPL-SN-362278	NASA-CASE-ARC-10903-1	US-PATENT-CLASS-102-39
		US-PATENT-CLASS-74-800	US-PATENT-APPL-SN-623536	US-PATENT-CLASS-102-49.7
N78-17386* #	c 37	US-PATENT-3,306,134	US-PATENT-CLASS-35-12N	US-PATENT-CLASS-102-70R
		NASA-CASE-NPO-10151	US-PATENT-CLASS-358-104	US-PATENT-CLASS-285-192
N78-17386* #	c 37	US-PATENT-APPL-SN-365244	US-PATENT-4,055,004	US-PATENT-CLASS-60-39.82E
		US-PATENT-CLASS-326-233	NASA-CASE-LEW-12095-1	US-PATENT-4,080,901
N78-17386* #	c 37	US-PATENT-3,387,218	US-PATENT-APPL-SN-651009	NASA-CASE-MFS-23506-1
		NASA-CASE-NPO-13283	US-PATENT-CLASS-75-124	US-PATENT-APPL-SN-760809
N78-17395* #	c 38	US-PATENT-APPL-SN-401225	US-PATENT-CLASS-75-126D	US-PATENT-CLASS-260-2.5AK
		US-PATENT-CLASS-235-151.3	US-PATENT-CLASS-75-126F	US-PATENT-CLASS-260-2.5AP
N78-17395* #	c 38	US-PATENT-CLASS-235-156	US-PATENT-CLASS-75-128G	US-PATENT-CLASS-260-2.5B
		US-PATENT-CLASS-235-181	US-PATENT-CLASS-75-128T	US-PATENT-CLASS-260-2.5BE
N78-17395* #	c 38	US-PATENT-CLASS-250-572	US-PATENT-4,055,416	US-PATENT-CLASS-260-2.5EP
		US-PATENT-CLASS-356-237	NASA-CASE-LEW-12905-1	US-PATENT-CLASS-260-2.5FP
N78-17395* #	c 38	US-PATENT-3,908,118	US-PATENT-APPL-SN-684171	US-PATENT-CLASS-260-29.1R
		NASA-CASE-NPO-13282	US-PATENT-CLASS-148-32	US-PATENT-CLASS-260-37EP
N78-17396* #	c 38	US-PATENT-APPL-SN-401224	US-PATENT-CLASS-148-32.5	US-PATENT-CLASS-427-427
		US-PATENT-CLASS-235-151.3	US-PATENT-CLASS-75-170	US-PATENT-4,077,921
N78-17396* #	c 38	US-PATENT-CLASS-235-156	US-PATENT-4,055,447	NASA-CASE-MSC-19693-1
		US-PATENT-CLASS-250-563	NASA-CASE-FRC-10090-1	US-PATENT-APPL-SN-708771
N78-17396* #	c 38	US-PATENT-CLASS-250-572	US-PATENT-APPL-SN-737974	US-PATENT-CLASS-148-12.7A
		US-PATENT-CLASS-356-165	US-PATENT-CLASS-307-265	US-PATENT-CLASS-148-125
N78-17396* #	c 38	US-PATENT-CLASS-356-237	US-PATENT-CLASS-307-350	US-PATENT-4,077,813
		US-PATENT-3,909,602	US-PATENT-CLASS-307-360	NASA-CASE-LEW-12081-1
N78-17460* #	c 44	NASA-CASE-NPO-13579-1	US-PATENT-CLASS-328-150	US-PATENT-APPL-SN-676432
		US-PATENT-APPL-SN-589969	US-PATENT-4,055,777	US-PATENT-CLASS-250-492R
N78-17460* #	c 44	US-PATENT-CLASS-126-263	NASA-CASE-LEW-12554-1	US-PATENT-CLASS-34-15
		US-PATENT-CLASS-126-271	US-PATENT-APPL-SN-686449	US-PATENT-CLASS-423-648R
N78-17460* #	c 44	US-PATENT-CLASS-165-2	US-PATENT-CLASS-427-34	US-PATENT-CLASS-62-100
		US-PATENT-CLASS-237-1A	US-PATENT-CLASS-427-405	US-PATENT-CLASS-62-48
N78-17460* #	c 44	US-PATENT-CLASS-60-641	US-PATENT-CLASS-427-419A	US-PATENT-4,077,788
		US-PATENT-CLASS-62-4	US-PATENT-CLASS-427-423	NASA-CASE-NPO-14140-1
N78-17675* #	c 54	US-PATENT-4,065,053	US-PATENT-CLASS-428-633	NASA-CASE-NPO-14381-1
		NASA-CASE-ARC-11101-1	US-PATENT-CLASS-428-652	US-PATENT-APPL-SN-897832
N78-17675* #	c 54	US-PATENT-APPL-SN-753976	US-PATENT-CLASS-428-667	NASA-CASE-NPO-13886-1
		US-PATENT-CLASS-2-2.1A	US-PATENT-4,055,705	US-PATENT-APPL-SN-730045
N78-17675* #	c 54	US-PATENT-CLASS-36-119	NASA-CASE-MFS-23008-1	US-PATENT-CLASS-307-151
		US-PATENT-CLASS-36-92	US-PATENT-APPL-SN-665734	US-PATENT-CLASS-343-700MS
N78-17675* #	c 54	US-PATENT-4,064,642	US-PATENT-CLASS-73-DIG.11	US-PATENT-CLASS-361-395
		NASA-CASE-MFS-23311-1	US-PATENT-CLASS-73-28	US-PATENT-4,079,268
N78-17676* #	c 54	US-PATENT-APPL-SN-708800	US-PATENT-CLASS-73-432PS	NASA-CASE-LAR-11201-1
		US-PATENT-CLASS-214-1CM	US-PATENT-CLASS-73-432R	US-PATENT-APPL-SN-788705
N78-17676* #	c 54	US-PATENT-CLASS-3-12.5	US-PATENT-4,055,089	US-PATENT-CLASS-416-144
		US-PATENT-CLASS-74-515E	NASA-CASE-NPO-13687-1	US-PATENT-CLASS-416-61
N78-17676* #	c 54	US-PATENT-4,068,763	US-PATENT-APPL-SN-641803	US-PATENT-CLASS-73-456
		NASA-CASE-MSC-13054	US-PATENT-CLASS-356-106S	US-PATENT-CLASS-73-756
N78-17677* #	c 54	US-PATENT-APPL-SN-585217	US-PATENT-CLASS-356-110	US-PATENT-4,082,001
		US-PATENT-CLASS-2-161	US-PATENT-4,053,231	NASA-CASE-MSC-16000-1
N78-17677* #	c 54	US-PATENT-3,490,074	NASA-CASE-NPO-13999-1	US-PATENT-APPL-SN-739915
		NASA-CASE-XMS-04670	US-PATENT-APPL-SN-858596	US-PATENT-CLASS-29-156.8R
N78-17677* #	c 54	US-PATENT-APPL-SN-535169	NASA-CASE-NPO-13801-1	US-PATENT-CLASS-29-23.5
		US-PATENT-CLASS-2-2.1	US-PATENT-APPL-SN-708796	US-PATENT-CLASS-29-244
N78-17677* #	c 54	US-PATENT-3,488,771	US-PATENT-CLASS-330-4	US-PATENT-CLASS-29-252
		NASA-CASE-XMS-04928	US-PATENT-CLASS-332-7.5	US-PATENT-4,078,290
N78-17679* #	c 54	US-PATENT-APPL-SN-584914	US-PATENT-4,055,810	NASA-CASE-LEW-12785-1
		US-PATENT-CLASS-98-1	NASA-CASE-MSC-10954-1	US-PATENT-APPL-SN-739909
N78-17679* #	c 54	US-PATENT-3,487,765	US-PATENT-APPL-SN-529884	US-PATENT-CLASS-60-39.28R
		NASA-CASE-XMS-09653	US-PATENT-CLASS-2-2.1	US-PATENT-4,078,378
N78-17680* #	c 54	US-PATENT-APPL-SN-538863	US-PATENT-3,514,785	NASA-CASE-GSC-12030-1
		US-PATENT-CLASS-2-6	NASA-CASE-GSC-12010-1	US-PATENT-APPL-SN-710035
N78-17680* #	c 54	US-PATENT-3,359,568	US-PATENT-APPL-SN-680958	US-PATENT-CLASS-308-10
		NASA-CASE-GSC-12044-1	US-PATENT-CLASS-250-213VT	US-PATENT-CLASS-310-153
N78-17680* #	c 54	US-PATENT-APPL-SN-631341	US-PATENT-CLASS-313-94	US-PATENT-CLASS-310-154
		US-PATENT-CLASS-340-347DD	US-PATENT-4,070,574	US-PATENT-CLASS-310-178
N78-17680* #	c 54	US-PATENT-4,069,478	NASA-CASE-NPO-13690-1	US-PATENT-CLASS-310-269
		NASA-CASE-MSC-12618-1	US-PATENT-APPL-SN-633876	US-PATENT-4,077,678
N78-17685* #	c 74	US-PATENT-APPL-SN-651007	US-PATENT-CLASS-106-39.5	NASA-CASE-GSC-12022-2
		US-PATENT-CLASS-350-159	US-PATENT-CLASS-106-65	US-PATENT-APPL-SN-693074
N78-17685* #	c 74	US-PATENT-CLASS-358-225	US-PATENT-CLASS-106-73.5	US-PATENT-CLASS-136-89SG
		US-PATENT-CLASS-358-41	US-PATENT-4,072,532	US-PATENT-CLASS-148-174
N78-17685* #	c 74	US-PATENT-CLASS-358-55	NASA-CASE-ARC-10896-1	US-PATENT-CLASS-29-572
		US-PATENT-4,067,043	US-PATENT-APPL-SN-615030	US-PATENT-CLASS-357-30
N78-17686* #	c 74	NASA-CASE-LAR-11711-1	US-PATENT-CLASS-73-23	US-PATENT-CLASS-357-59
		US-PATENT-APPL-SN-874195	US-PATENT-4,055,072	US-PATENT-CLASS-427-113
N78-17686* #	c 74	US-PATENT-CLASS-250-201	NASA-CASE-ARC-10820-1	US-PATENT-CLASS-427-248J
		US-PATENT-CLASS-350-204	US-PATENT-APPL-SN-620675	US-PATENT-CLASS-427-249
N78-17686* #	c 74	US-PATENT-CLASS-356-28	US-PATENT-CLASS-119-51.11	US-PATENT-CLASS-427-86
		US-PATENT-4,063,814	US-PATENT-CLASS-119-72.5	US-PATENT-4,077,818
N78-17687* #	c 74	NASA-CASE-NPO-13759-1	US-PATENT-CLASS-137-624.11	NASA-CASE-MFS-23315-1
		US-PATENT-APPL-SN-718266	US-PATENT-4,055,147	US-PATENT-APPL-SN-724874
N78-17687* #	c 74	US-PATENT-CLASS-250-344	NASA-CASE-LEW-12159-1	US-PATENT-CLASS-250-277CH
		US-PATENT-CLASS-356-204	US-PATENT-APPL-SN-643041	US-PATENT-CLASS-250-280
N78-17687* #	c 74	US-PATENT-CLASS-356-246	US-PATENT-CLASS-126-270	US-PATENT-4,078,175
		US-PATENT-4,067,653	US-PATENT-CLASS-427-160	NASA-CASE-LEW-12452-1
N78-18066* #	c 07	NASA-CASE-LEW-12389-2	US-PATENT-CLASS-428-652	US-PATENT-APPL-SN-695513
		US-PATENT-APPL-SN-628221		US-PATENT-CLASS-60-226R

		US-PATENT-CLASS-60-39.52				US-PATENT-CLASS-320-15				US-PATENT-CLASS-356-167
		US-PATENT-4,083,181				US-PATENT-CLASS-320-32				US-PATENT-4,088,408
N78-25090* #	c 07	NASA-CASE-LEW-11855-1				US-PATENT-CLASS-320-39				NASA-CASE-MFS-22906-1
		US-PATENT-APPL-SN-872222				US-PATENT-CLASS-320-8				US-PATENT-APPL-SN-684807
		US-PATENT-CLASS-277-134				US-PATENT-4,084,124				US-PATENT-CLASS-29-91C
		US-PATENT-CLASS-277-25				US-PATENT-4,084,825				US-PATENT-CLASS-313-231.3
N78-25119* #	c 15	NASA-CASE-MFS-23564-1				US-PATENT-4,084,825				US-PATENT-CLASS-315-111.2
		US-PATENT-APPL-SN-739908				US-PATENT-4,084,825				US-PATENT-4,088,926
		US-PATENT-CLASS-244-161				US-PATENT-4,084,825				NASA-CASE-KSC-11035-1
		US-PATENT-CLASS-244-167				US-PATENT-4,084,825				US-PATENT-APPL-SN-780874
		US-PATENT-4,083,520				US-PATENT-4,088,270				US-PATENT-CLASS-324-130
N78-25148* #	c 25	NASA-CASE-LEW-12465-1				US-PATENT-4,088,270				US-PATENT-CLASS-324-32
		US-PATENT-APPL-SN-692413				US-PATENT-APPL-SN-923758				US-PATENT-CLASS-324-74
		US-PATENT-CLASS-250-423P				NASA-CASE-ARC-11043-1				US-PATENT-4,088,951
		US-PATENT-CLASS-250-528				US-PATENT-APPL-SN-753964				NASA-CASE-NPO-13821-1
		US-PATENT-CLASS-250-531				US-PATENT-CLASS-260-33.6EP				US-PATENT-APPL-SN-688852
		US-PATENT-CLASS-55-100				US-PATENT-CLASS-260-33.6PQ				US-PATENT-CLASS-343-113R
		US-PATENT-CLASS-55-101				US-PATENT-CLASS-260-33.8EP				US-PATENT-CLASS-343-119
		US-PATENT-CLASS-55-2				US-PATENT-CLASS-260-33.8UA				US-PATENT-CLASS-343-16M
		US-PATENT-4,085,332				US-PATENT-CLASS-260-37EP				US-PATENT-4,088,999
N78-25256* #	c 31	NASA-CASE-NPO-13839-1				US-PATENT-CLASS-260-42.43				NASA-CASE-NPO-13114-2
		US-PATENT-APPL-SN-712981				US-PATENT-CLASS-260-45.7R				US-PATENT-APPL-SN-294738
		US-PATENT-CLASS-250-332				US-PATENT-CLASS-260-45.75W				US-PATENT-APPL-SN-634214
		US-PATENT-CLASS-313-22				US-PATENT-CLASS-260-45.85N				US-PATENT-CLASS-176-22
		US-PATENT-CLASS-62-514R				US-PATENT-CLASS-260-45.9R				US-PATENT-CLASS-176-33
		US-PATENT-4,077,231				US-PATENT-CLASS-427-386				US-PATENT-CLASS-176-39
N78-25319* #	c 33	NASA-CASE-NPO-13909-1				US-PATENT-CLASS-427-386A				US-PATENT-4,085,004
		US-PATENT-APPL-SN-744477				US-PATENT-CLASS-428-313				NASA-CASE-NPO-11954-1
		US-PATENT-CLASS-324-57DE				US-PATENT-CLASS-428-332				US-PATENT-APPL-SN-229287
		US-PATENT-CLASS-324-57SS				US-PATENT-CLASS-428-921				US-PATENT-CLASS-179-100.2CH
		US-PATENT-CLASS-324-58A				US-PATENT-4,088,806				US-PATENT-CLASS-340-174.1M
		US-PATENT-4,084,132				NASA-CASE-ARC-11040-2				US-PATENT-CLASS-340-174YC
N78-25350* #	c 34	NASA-CASE-MSC-19568-1				US-PATENT-APPL-SN-920878				US-PATENT-CLASS-350-151
		US-PATENT-APPL-SN-681000				NASA-CASE-LEW-10518-3				US-PATENT-3,775,570
		US-PATENT-CLASS-428-913				US-PATENT-APPL-SN-394207				NASA-CASE-MSC-19706-1
		US-PATENT-CLASS-428-93				US-PATENT-CLASS-176-11				US-PATENT-APPL-SN-767911
		US-PATENT-CLASS-428-94				US-PATENT-CLASS-176-16				US-PATENT-CLASS-239-265.25
		US-PATENT-CLASS-428-95				US-PATENT-CLASS-250-400				US-PATENT-CLASS-73-147
		US-PATENT-CLASS-428-96				US-PATENT-CLASS-250-429				US-PATENT-4,091,665
		US-PATENT-CLASS-428-97				US-PATENT-CLASS-250-492B				NASA-CASE-ARC-11008-1
		US-PATENT-CLASS-49-DIG.1				US-PATENT-4,088,532				US-PATENT-APPL-SN-708951
		US-PATENT-CLASS-49-479				NASA-CASE-MFS-23312-1				US-PATENT-CLASS-260-2.5N
		US-PATENT-CLASS-49-485				US-PATENT-APPL-SN-699012				US-PATENT-CLASS-260-47CP
		US-PATENT-4,078,110				US-PATENT-CLASS-29-571				US-PATENT-CLASS-260-63N
N78-25351* #	c 34	NASA-CASE-LEW-12718-1				US-PATENT-CLASS-29-578				US-PATENT-CLASS-260-78.41
		US-PATENT-APPL-SN-779428				US-PATENT-CLASS-357-91				US-PATENT-4,092,274
		US-PATENT-CLASS-137-484.2				US-PATENT-4,087,902				NASA-CASE-ARC-11057-1
		US-PATENT-CLASS-137-501				NASA-CASE-LEW-11877-1				US-PATENT-APPL-SN-807762
		US-PATENT-CLASS-137-505.16				US-PATENT-APPL-SN-708860				US-PATENT-CLASS-350-165
		US-PATENT-4,084,612				US-PATENT-CLASS-431-10				US-PATENT-CLASS-350-175NG
N78-25391* #	c 35	NASA-CASE-NPO-13948-1				US-PATENT-CLASS-431-328				US-PATENT-CLASS-427-164
		US-PATENT-APPL-SN-752748				US-PATENT-CLASS-431-7				US-PATENT-CLASS-427-40
		US-PATENT-CLASS-204-195W				US-PATENT-CLASS-60-39.65				US-PATENT-CLASS-427-41
		US-PATENT-CLASS-73-336.5				US-PATENT-CLASS-60-39.69R				US-PATENT-CLASS-428-411
		US-PATENT-4,083,765				US-PATENT-4,087,962				US-PATENT-CLASS-428-412
N78-25426* #	c 37	NASA-CASE-MSC-12731-1				NASA-CASE-LAR-11973-1				US-PATENT-CLASS-428-422
		US-PATENT-APPL-SN-690816				US-PATENT-APPL-SN-821681				US-PATENT-CLASS-428-447
		US-PATENT-CLASS-137-505.25				US-PATENT-CLASS-73-170A				US-PATENT-CLASS-428-515
		US-PATENT-CLASS-137-625.3				US-PATENT-CLASS-73-425.4R				US-PATENT-CLASS-428-523
		US-PATENT-CLASS-137-625.38				US-PATENT-CLASS-73-61R				US-PATENT-CLASS-428-538
		US-PATENT-4,083,380				US-PATENT-4,089,209				US-PATENT-4,091,166
N78-25527* #	c 44	NASA-CASE-LEW-12552-1				NASA-CASE-NPO-13945-1				NASA-CASE-NPO-14103-1
		US-PATENT-APPL-SN-770869				US-PATENT-APPL-SN-704180				US-PATENT-APPL-SN-797210
		US-PATENT-CLASS-136-89CC				US-PATENT-CLASS-331-94.5G				US-PATENT-CLASS-149-105
		US-PATENT-CLASS-29-572				US-PATENT-CLASS-331-94.5P				US-PATENT-CLASS-149-111
		US-PATENT-CLASS-357-30				US-PATENT-CLASS-331-94.5PE				US-PATENT-CLASS-149-19.4
		US-PATENT-CLASS-357-65				US-PATENT-4,088,965				US-PATENT-CLASS-149-19.8
		US-PATENT-CLASS-357-67				NASA-CASE-MSC-16270-1				US-PATENT-CLASS-149-88
		US-PATENT-CLASS-427-261				US-PATENT-APPL-SN-837260				US-PATENT-CLASS-149-92
		US-PATENT-CLASS-427-75				US-PATENT-CLASS-269-21				US-PATENT-CLASS-149-93
		US-PATENT-4,082,569				US-PATENT-CLASS-269-266				US-PATENT-4,092,188
N78-25528* #	c 44	NASA-CASE-LEW-12185-1				US-PATENT-4,088,312				NASA-CASE-NPO-14022-1
		US-PATENT-APPL-SN-746269				NASA-CASE-LAR-11889-2				US-PATENT-APPL-SN-780728
		US-PATENT-CLASS-136-89H				US-PATENT-APPL-SN-662182				US-PATENT-CLASS-343-781CA
		US-PATENT-CLASS-136-89P				US-PATENT-APPL-SN-807703				US-PATENT-CLASS-343-782
		US-PATENT-CLASS-29-572				US-PATENT-CLASS-308-10				US-PATENT-CLASS-343-837
		US-PATENT-CLASS-29-628				US-PATENT-CLASS-73-178R				US-PATENT-4,092,648
		US-PATENT-4,083,097				US-PATENT-4,088,018				NASA-CASE-GSC-11883-2
N78-25529* #	c 44	NASA-CASE-LEW-12541-1				NASA-CASE-ARC-10981-1				US-PATENT-APPL-SN-596787
		US-PATENT-APPL-SN-790637				US-PATENT-APPL-SN-738218				US-PATENT-APPL-SN-747675
		US-PATENT-CLASS-136-89CC				US-PATENT-CLASS-248-178				US-PATENT-CLASS-60-527
		US-PATENT-CLASS-136-89H				US-PATENT-CLASS-248-186				US-PATENT-CLASS-74-100R
		US-PATENT-CLASS-136-89P				US-PATENT-4,088,291				US-PATENT-4,010,455
		US-PATENT-CLASS-156-633				NASA-CASE-NPO-12148-1				US-PATENT-4,092,874
		US-PATENT-CLASS-29-572				US-PATENT-APPL-SN-709415				NASA-CASE-NPO-13581-2
		US-PATENT-4,084,985				US-PATENT-CLASS-136-89P				US-PATENT-APPL-SN-590975
N78-25530* #	c 44	NASA-CASE-LEW-12649-1				US-PATENT-4,089,705				US-PATENT-APPL-SN-811815
		US-PATENT-APPL-SN-720521				NASA-CASE-ARC-10917-1				US-PATENT-CLASS-126-271
		US-PATENT-CLASS-427-385B				US-PATENT-APPL-SN-672223				US-PATENT-CLASS-237-1A
		US-PATENT-CLASS-427-385C				US-PATENT-CLASS-119-29				US-PATENT-4,091,800
		US-PATENT-CLASS-429-254				US-PATENT-4,088,094				NASA-CASE-NPO-13813-1
		US-PATENT-4,085,241				NASA-CASE-MSC-16433-1				NASA-CASE-NPO-13914-1
N78-25531* #	c 44	NASA-CASE-MFS-23270-1				US-PATENT-APPL-SN-910992				US-PATENT-APPL-SN-765139
		US-PATENT-APPL-SN-744573				NASA-CASE-LAR-11869-1				US-PATENT-CLASS-126-270
		US-PATENT-CLASS-320-13				US-PATENT-APPL-SN-740155				US-PATENT-CLASS-126-271
						US-PATENT-CLASS-356-120				US-PATENT-CLASS-350-299



N78-31527* #	c 44	US-PATENT-4,091,798	N78-32338* #	c 33	NASA-CASE-GSC-12137-1	N78-33228* #	c 27	US-PATENT-CLASS-29-463
		NASA-CASE-NPO-13937-1			US-PATENT-APPL-SN-808510			US-PATENT-CLASS-416-214A
		US-PATENT-APPL-SN-718137			US-PATENT-CLASS-329-124			US-PATENT-CLASS-416-244A
		US-PATENT-CLASS-201-17			US-PATENT-CLASS-331-12			US-PATENT-CLASS-74-572
N78-31735* #	c 54	US-PATENT-CLASS-44-1R	N78-32339* #	c 33	US-PATENT-CLASS-331-4	N78-33526* #	c 44	US-PATENT-4,097,194
		US-PATENT-CLASS-44-2			US-PATENT-CLASS-331-64			NASA-CASE-NPO-08835-1
		US-PATENT-4,081,250			US-PATENT-4,092,606			US-PATENT-APPL-SN-588721
		NASA-CASE-ARC-11058-1			NASA-CASE-GSC-12145-1			US-PATENT-CLASS-260-28.5
N78-31736* #	c 54	US-PATENT-APPL-SN-753965	N78-32340* #	c 33	US-PATENT-APPL-SN-769149	N79-10057* #	c 07	US-PATENT-3,527,724
		US-PATENT-CLASS-2-2.1A			US-PATENT-CLASS-307-229			NASA-CASE-NPO-13763-1
		US-PATENT-CLASS-285-235			US-PATENT-CLASS-307-230			US-PATENT-APPL-SN-718268
		US-PATENT-4,091,464			US-PATENT-CLASS-328-145			US-PATENT-CLASS-123-DIG.12
N78-32086* #	c 05	NASA-CASE-ARC-11100-1	N78-32341* #	c 33	US-PATENT-4,091,329	N79-10162* #	c 25	US-PATENT-CLASS-123-1A
		US-PATENT-APPL-SN-780569			NASA-CASE-GSC-12146-1			US-PATENT-CLASS-123-3
		US-PATENT-CLASS-2-2.1A			US-PATENT-APPL-SN-782480			US-PATENT-4,112,875
		US-PATENT-4,091,465			US-PATENT-CLASS-325-159			NASA-CASE-NPO-10233-1
N78-32168* #	c 15	US-PATENT-CLASS-325-187	N78-32397* #	c 35	US-PATENT-CLASS-333-17R	N79-10262* #	c 32	US-PATENT-APPL-SN-716885
		US-PATENT-CLASS-333-81R			US-PATENT-CLASS-250-218			US-PATENT-CLASS-250-227
		US-PATENT-4,092,617			US-PATENT-CLASS-250-239			US-PATENT-CLASS-356-208
		NASA-CASE-LEW-12791-1			US-PATENT-3,573,470			NASA-CASE-LEW-12232-1
N78-32179* #	c 20	US-PATENT-APPL-SN-801432	N78-32447* #	c 38	US-PATENT-CLASS-363-16	N79-10263* #	c 32	US-PATENT-APPL-SN-776029
		US-PATENT-CLASS-363-101			US-PATENT-CLASS-363-60			US-PATENT-CLASS-415-115
		US-PATENT-CLASS-363-16			US-PATENT-4,092,712			US-PATENT-CLASS-415-116
		US-PATENT-CLASS-363-60			NASA-CASE-ARC-11036-1			US-PATENT-CLASS-60-39.14
N78-32229* #	c 26	US-PATENT-APPL-SN-740457	N78-32539* #	c 44	US-PATENT-APPL-SN-70036	N79-10337* #	c 33	US-PATENT-4,117,669
		US-PATENT-CLASS-33-366			US-PATENT-CLASS-350-3.5			US-PATENT-4,117,669
		US-PATENT-4,094,073			US-PATENT-CLASS-356-72			NASA-CASE-ARC-11053-1
		NASA-CASE-MFS-23363-1			US-PATENT-CLASS-356-73			US-PATENT-APPL-SN-814378
N78-32256* #	c 27	US-PATENT-CLASS-73-603	N78-32720* #	c 54	US-PATENT-CLASS-324-207	N79-10338* #	c 33	US-PATENT-CLASS-23-252R
		US-PATENT-4,093,382			US-PATENT-4,093,917			US-PATENT-CLASS-423-581
		NASA-CASE-LAR-11617-2			NASA-CASE-LAR-11208-1			US-PATENT-4,101,644
		US-PATENT-APPL-SN-547072			US-PATENT-APPL-SN-710036			NASA-CASE-NPO-13274-1
N78-32260* #	c 27	US-PATENT-APPL-SN-668771	N78-32721* #	c 54	US-PATENT-CLASS-204-180S	N79-10389* #	c 35	US-PATENT-APPL-SN-406296
		US-PATENT-CLASS-324-249			US-PATENT-CLASS-340-146.1AX			US-PATENT-CLASS-204-299
		US-PATENT-4,088,954			US-PATENT-CLASS-340-146.1E			US-PATENT-3,932,262
		NASA-CASE-MFS-23114-1			US-PATENT-4,100,531			NASA-CASE-NPO-13941-1
N78-32261* #	c 27	US-PATENT-CLASS-350-3.5	N78-32848* #	c 73	US-PATENT-CLASS-356-72	N79-10390* #	c 35	US-PATENT-APPL-SN-774384
		US-PATENT-CLASS-356-73			US-PATENT-CLASS-60-39.07			US-PATENT-CLASS-307-233R
		US-PATENT-CLASS-73-603			US-PATENT-CLASS-60-39.14			US-PATENT-CLASS-324-77B
		US-PATENT-4,093,382			US-PATENT-CLASS-60-39.33			US-PATENT-CLASS-324-77C
N78-32262* #	c 27	US-PATENT-4,093,613	N78-33101* #	c 07	US-PATENT-CLASS-98-1.5	N79-10418* #	c 37	US-PATENT-4,118,666
		NASA-CASE-KSC-11034-1			US-PATENT-4,091,613			US-PATENT-4,118,666
		US-PATENT-APPL-SN-782481			NASA-CASE-KSC-11018-1			NASA-CASE-MSC-12743-1
		US-PATENT-CLASS-60-641			US-PATENT-APPL-SN-782693			US-PATENT-APPL-SN-765167
N78-32262* #	c 27	US-PATENT-CLASS-60-671	N78-33262* #	c 27	US-PATENT-CLASS-324-96	N79-10418* #	c 37	US-PATENT-CLASS-325-41
		US-PATENT-4,087,975			US-PATENT-4,100,487			US-PATENT-CLASS-340-146.1AX
		NASA-CASE-MSC-14805-1			US-PATENT-4,118,701			US-PATENT-CLASS-340-146.1E
		US-PATENT-APPL-SN-688856			NASA-CASE-MFS-22234-1			US-PATENT-4,100,531
N78-32262* #	c 27	US-PATENT-CLASS-340-213R	N78-33262* #	c 27	US-PATENT-CLASS-60-39.07	N79-10418* #	c 37	NASA-CASE-MFS-22234-1
		US-PATENT-CLASS-340-262			US-PATENT-CLASS-60-39.14			US-PATENT-APPL-SN-13941-1
		US-PATENT-CLASS-340-279			US-PATENT-CLASS-60-39.33			US-PATENT-APPL-SN-774384
		US-PATENT-CLASS-340-285			US-PATENT-CLASS-98-1.5			US-PATENT-CLASS-307-233R
N78-32262* #	c 27	US-PATENT-CLASS-340-309.1	N78-33262* #	c 27	US-PATENT-4,092,633	N79-10418* #	c 37	US-PATENT-CLASS-324-77B
		US-PATENT-4,092,633			NASA-CASE-ARC-11059-1			US-PATENT-CLASS-324-77C
		NASA-CASE-ARC-11059-1			US-PATENT-APPL-SN-753978			US-PATENT-4,118,665
		US-PATENT-CLASS-128-142.7			US-PATENT-CLASS-62-259			NASA-CASE-LEW-12013-1
N78-32262* #	c 27	US-PATENT-4,095,593	N78-33262* #	c 27	US-PATENT-APPL-SN-768795	N79-10418* #	c 37	US-PATENT-APPL-SN-768795
		NASA-CASE-GSC-12083-1			US-PATENT-CLASS-301-82			US-PATENT-CLASS-315-3.5
		US-PATENT-APPL-SN-643897			US-PATENT-CLASS-315-3.6			US-PATENT-CLASS-315-3.6
		US-PATENT-CLASS-350-170			US-PATENT-CLASS-330-43			US-PATENT-CLASS-315-3.6
N78-32262* #	c 27	US-PATENT-CLASS-350-173	N78-33262* #	c 27	US-PATENT-4,118,671	N79-10418* #	c 37	US-PATENT-CLASS-330-43
		US-PATENT-CLASS-350-174			NASA-CASE-MFS-23461-1			US-PATENT-4,118,671
		US-PATENT-CLASS-350-286			US-PATENT-APPL-SN-694406			US-PATENT-CLASS-330-43
		US-PATENT-CLASS-350-320			US-PATENT-CLASS-250-475			US-PATENT-CLASS-330-43
N78-32262* #	c 27	US-PATENT-4,093,354	N78-33262* #	c 27	US-PATENT-CLASS-252-301.1R	N79-10418* #	c 37	US-PATENT-CLASS-252-301.1R
		NASA-CASE-ARC-11039-1			US-PATENT-CLASS-96-27R			US-PATENT-CLASS-252-301.1R
		US-PATENT-APPL-SN-750655			US-PATENT-CLASS-96-60R			US-PATENT-CLASS-96-60R
		US-PATENT-CLASS-351-166			US-PATENT-4,101,780			US-PATENT-CLASS-96-60R
N78-32262* #	c 27	US-PATENT-CLASS-427-164	N78-33262* #	c 27	US-PATENT-CLASS-73-579	N79-10418* #	c 37	US-PATENT-CLASS-73-579
		US-PATENT-CLASS-427-302			US-PATENT-CLASS-73-589			US-PATENT-CLASS-73-589
		US-PATENT-CLASS-427-322			US-PATENT-4,117,731			US-PATENT-4,117,731
		US-PATENT-CLASS-427-38			NASA-CASE-NPO-13862-1			NASA-CASE-NPO-13862-1
N78-32262* #	c 27	US-PATENT-CLASS-427-387	N78-33262* #	c 27	US-PATENT-APPL-SN-744577	N79-10418* #	c 37	US-PATENT-APPL-SN-744577
		US-PATENT-CLASS-427-41			US-PATENT-CLASS-324-77K			US-PATENT-CLASS-324-77K
		US-PATENT-CLASS-427-44			US-PATENT-CLASS-343-17.2PC			US-PATENT-CLASS-343-17.2PC
		US-PATENT-CLASS-428-412			US-PATENT-CLASS-343-5CM			US-PATENT-CLASS-343-5CM
N78-32262* #	c 27	US-PATENT-CLASS-428-447	N78-33262* #	c 27	US-PATENT-4,101,891	N79-10418* #	c 37	US-PATENT-4,101,891
		US-PATENT-4,096,315			NASA-CASE-LEW-12569-1			US-PATENT-4,101,891
		NASA-CASE-LEW-12496-1			US-PATENT-APPL-SN-792069			US-PATENT-APPL-SN-792069
		US-PATENT-APPL-SN-688971						

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		US-PATENT-CLASS-250-214AL			US-PATENT-APPL-SN-589172			US-PATENT-CLASS-303-92
		US-PATENT-CLASS-250-214R			US-PATENT-APPL-SN-787912			US-PATENT-CLASS-415-9
		US-PATENT-CLASS-315-153			US-PATENT-CLASS-427-294			US-PATENT-CLASS-416-2
		US-PATENT-4,122,334			US-PATENT-CLASS-427-41			US-PATENT-CLASS-74-572
N79-13214* #	c 32	NASA-CASE-NPO-14009-1			US-PATENT-CLASS-428-411			US-PATENT-4,132,130
		US-PATENT-APPL-SN-818917			US-PATENT-4,132,829			N79-14528* #
		US-PATENT-CLASS-343-117R			NASA-CASE-NPO-10866-1			c 44
		US-PATENT-CLASS-343-118			US-PATENT-APPL-SN-849274			NASA-CASE-LEW-12236-2
		US-PATENT-CLASS-343-7.4			US-PATENT-CLASS-149-19.9			US-PATENT-APPL-SN-760771
		US-PATENT-4,122,454			US-PATENT-CLASS-149-19.2			US-PATENT-APPL-SN-899123
N79-13288* #	c 34	NASA-CASE-LEW-12252-1			US-PATENT-CLASS-149-20			US-PATENT-CLASS-357-30
		US-PATENT-APPL-SN-559847			US-PATENT-CLASS-149.22			US-PATENT-4,131,486
		US-PATENT-CLASS-165-169			US-PATENT-4,111,729			N79-14529* #
		US-PATENT-CLASS-239-127.1			NASA-CASE-NPO-13982-1			c 44
		US-PATENT-CLASS-60-267			US-PATENT-APPL-SN-782464			NASA-CASE-NPO-13579-4
		US-PATENT-4,107,919			US-PATENT-CLASS-329-122			US-PATENT-APPL-SN-906297
N79-13289* #	c 34	NASA-CASE-LEW-12441-1			US-PATENT-CLASS-343-14			US-PATENT-CLASS-126-271
		US-PATENT-APPL-SN-559846			US-PATENT-CLASS-364-458			US-PATENT-CLASS-350-292
		US-PATENT-CLASS-165-146			US-PATENT-CLASS-364-604			US-PATENT-CLASS-350-293
		US-PATENT-CLASS-165-169			US-PATENT-CLASS-364-728			US-PATENT-CLASS-350-320
		US-PATENT-CLASS-239-127.1			US-PATENT-4,112,497			US-PATENT-4,131,336
		US-PATENT-CLASS-60-267			N79-14268* #			N79-14749* #
		US-PATENT-4,108,241			c 32			c 52
N79-13364* #	c 37	NASA-CASE-LAR-10941-2			NASA-CASE-NPO-14019-1			NASA-CASE-NPO-13930-1
		US-PATENT-APPL-SN-395493			US-PATENT-APPL-SN-843308			US-PATENT-APPL-SN-700467
		US-PATENT-CLASS-228-107			US-PATENT-CLASS-343-100CL			US-PATENT-CLASS-128-214D
		US-PATENT-CLASS-228-2.5			US-PATENT-CLASS-343-5CM			US-PATENT-CLASS-128-272
		US-PATENT-CLASS-29-421E			US-PATENT-4,132,969			US-PATENT-CLASS-150-1
		US-PATENT-4,106,687			N79-14305* #			US-PATENT-CLASS-195-1.8
N79-13826* #	c 72	NASA-CASE-NPO-13993-1			c 33			US-PATENT-CLASS-206-439
		US-PATENT-APPL-SN-782463			NASA-CASE-KSC-11057-1			US-PATENT-CLASS-210-DIG.23
		US-PATENT-CLASS-331-94.5L			US-PATENT-APPL-SN-835544			US-PATENT-CLASS-422-41
		US-PATENT-CLASS-331-94.5P			US-PATENT-CLASS-324-102			US-PATENT-CLASS-422-48
		US-PATENT-CLASS-331-94.5PE			US-PATENT-CLASS-324-112			US-PATENT-CLASS-55-15.8
		US-PATENT-4,107,627			US-PATENT-CLASS-324-113			US-PATENT-4,132,594
N79-13855* #	c 74	NASA-CASE-MFS-23052-2			US-PATENT-CLASS-324-133			N79-14750* #
		US-PATENT-APPL-SN-590183			US-PATENT-CLASS-324-72			c 52
		US-PATENT-APPL-SN-772165			US-PATENT-4,112,357			NASA-CASE-GSC-12046-1
		US-PATENT-CLASS-35-12C			N79-14345* #			US-PATENT-APPL-SN-680015
		US-PATENT-CLASS-35-12N			c 35			US-PATENT-CLASS-195-103.5K
		US-PATENT-CLASS-358-104			NASA-CASE-LEW-12661-1			US-PATENT-CLASS-195-103.5L
		US-PATENT-4,106,218			US-PATENT-APPL-SN-837796			US-PATENT-4,132,599
N79-14095* #	c 07	NASA-CASE-LEW-13050-1			US-PATENT-CLASS-73-115			N79-14751* #
		US-PATENT-APPL-SN-513346			US-PATENT-4,111,041			c 52
		US-PATENT-CLASS-416-157B			N79-14346* #			NASA-CASE-NPO-13935-1
		US-PATENT-CLASS-416-160			c 35			NASA-CASE-NPO-13944-1
		US-PATENT-CLASS-416-162			NASA-CASE-LEW-12174-2			US-PATENT-APPL-SN-741749
		US-PATENT-CLASS-416-167			US-PATENT-APPL-SN-667929			US-PATENT-CLASS-128-2V
		US-PATENT-4,124,330			US-PATENT-APPL-SN-853879			US-PATENT-CLASS-73-633
N79-14096* #	c 07	NASA-CASE-LEW-12369-3			US-PATENT-CLASS-136-202			US-PATENT-CLASS-73-644
		US-PATENT-APPL-SN-552108			US-PATENT-4,111,718			US-PATENT-4,130,112
		US-PATENT-APPL-SN-753452			N79-14347* #			N79-14871* #
		US-PATENT-CLASS-137-15.1			c 35			c 71
		US-PATENT-CLASS-244-54			NASA-CASE-LAR-12230-1			NASA-CASE-LEW-12658-1
		US-PATENT-CLASS-415-200			US-PATENT-APPL-SN-835628			US-PATENT-APPL-SN-702115
		US-PATENT-CLASS-415-201			US-PATENT-CLASS-73-147			US-PATENT-CLASS-181-190
		US-PATENT-CLASS-60-226A			US-PATENT-CLASS-73-4R			US-PATENT-CLASS-181-213
		US-PATENT-CLASS-60-226R			US-PATENT-CLASS-73-714			US-PATENT-CLASS-181-222
		US-PATENT-CLASS-60-39.31			US-PATENT-CLASS-73-721			US-PATENT-CLASS-181-293
		US-PATENT-4,132,069			US-PATENT-CLASS-73-756			US-PATENT-4,106,587
N79-14097* #	c 07	NASA-CASE-LEW-12378-1			US-PATENT-4,111,058			N79-14891* #
		US-PATENT-APPL-SN-573029			N79-14348* #			c 74
		US-PATENT-CLASS-239-265.39			c 35			NASA-CASE-GSC-12225-1
		US-PATENT-CLASS-60-226A			NASA-CASE-NPO-13569-2			US-PATENT-APPL-SN-823566
		US-PATENT-4,132,068			US-PATENT-APPL-SN-565162			US-PATENT-CLASS-350-157
N79-14108* #	c 08	NASA-CASE-LAR-11868-2			US-PATENT-APPL-SN-804035			US-PATENT-4,129,357
		US-PATENT-APPL-SN-651002			US-PATENT-CLASS-318-573			N79-14892* #
		US-PATENT-APPL-SN-779429			US-PATENT-CLASS-318-594			c 74
		US-PATENT-CLASS-244-218			US-PATENT-CLASS-318-640			NASA-CASE-LAR-12251-1
		US-PATENT-CLASS-244-46			US-PATENT-4,132,940			US-PATENT-APPL-SN-953389
		US-PATENT-CLASS-244-90R			N79-14349* #			N79-14906* #
		US-PATENT-4,132,375			c 35			c 76
N79-14156* #	c 24	NASA-CASE-GSC-12207-1			NASA-CASE-LAR-11859-1			NASA-CASE-MFS-23541-1
		US-PATENT-APPL-SN-844344			US-PATENT-APPL-SN-861396			US-PATENT-APPL-SN-814005
		US-PATENT-CLASS-106-296			US-PATENT-CLASS-324-57R			US-PATENT-CLASS-204-192C
		US-PATENT-CLASS-106-84			US-PATENT-4,130,795			US-PATENT-4,111,775
		US-PATENT-CLASS-252-518			N79-14362* #			N79-15245* #
		US-PATENT-4,111,851			c 36			c 33
N79-14169* #	c 25	NASA-CASE-ARC-11121-1			NASA-CASE-GSC-12334-1			NASA-CASE-ARC-10975-1
		US-PATENT-APPL-SN-850507			US-PATENT-APPL-SN-856464			US-PATENT-APPL-SN-799832
		US-PATENT-CLASS-204-180G			US-PATENT-CLASS-324-0.5			US-PATENT-CLASS-250-531
		US-PATENT-CLASS-204-180S			US-PATENT-CLASS-331-94			US-PATENT-CLASS-250-540
		US-PATENT-CLASS-204-299R			US-PATENT-4,128,814			US-PATENT-CLASS-250-541
		US-PATENT-CLASS-23-230B			N79-14382* #			US-PATENT-4,130,490
		US-PATENT-CLASS-424-12			c 37			N79-16246* #
		US-PATENT-4,130,471			NASA-CASE-LAR-11900-1			c 35
N79-14213* #	c 27	NASA-CASE-NPO-13690-2			US-PATENT-APPL-SN-775239			NASA-CASE-NPO-10872-1
		US-PATENT-APPL-SN-858766			US-PATENT-CLASS-403-105			US-PATENT-APPL-SN-805549
		US-PATENT-CLASS-264-60			US-PATENT-CLASS-416-61			US-PATENT-CLASS-179-100.2CH
		US-PATENT-CLASS-75-203			US-PATENT-CLASS-74-586			US-PATENT-CLASS-340-174.1M
		US-PATENT-CLASS-75-205			US-PATENT-4,111,068			US-PATENT-CLASS-346-74MT
		US-PATENT-CLASS-75-206			N79-14383* #			US-PATENT-3,626,114
		US-PATENT-CLASS-75-212			c 37			N79-16678* #
		US-PATENT-CLASS-75-226			NASA-CASE-NPO-13541-1			c 76
		US-PATENT-4,131,459			US-PATENT-APPL-SN-828262			NASA-CASE-NPO-11336-1
N79-14214* #	c 27	NASA-CASE-ARC-10892-2			US-PATENT-CLASS-81-119			NASA-CASE-NPO-13247-1
					US-PATENT-CLASS-81-180B			US-PATENT-APPL-SN-302913
					US-PATENT-CLASS-81-90B			US-PATENT-CLASS-117-107
					US-PATENT-4,130,032			US-PATENT-CLASS-117-119
					N79-14398* #			US-PATENT-CLASS-117-234
					c 38			US-PATENT-CLASS-117-235
					NASA-CASE-MS-19672-1			US-PATENT-CLASS-117-237
					US-PATENT-APPL-SN-896679			US-PATENT-CLASS-117-239
					US-PATENT-CLASS-310-326			US-PATENT-CLASS-117-240
					US-PATENT-CLASS-310-336			US-PATENT-CLASS-148-121
					US-PATENT-CLASS-73-632			US-PATENT-CLASS-148-6
					US-PATENT-CLASS-73-641			US-PATENT-CLASS-75-134D
					US-PATENT-CLASS-73-644			US-PATENT-3,837,908
					US-PATENT-4,122,725			N79-16915* #
N79-14526* #	c 44	NASA-CASE-NPO-13921-1			N79-14527* #			c 24
		US-PATENT-APPL-SN-785257			c 44			NASA-CASE-ARC-11040-1
		US-PATENT-CLASS-126-270			NASA-CASE-NPO-13921-1			US-PATENT-APPL-SN-778195
		US-PATENT-CLASS-126-271			US-PATENT-APPL-SN-785257			US-PATENT-CLASS-156-331
		US-PATENT-4,111,184			US-PATENT-CLASS-126-270			US-PATENT-CLASS-428-117
					US-PATENT-CLASS-126-271			US-PATENT-CLASS-428-119
					US-PATENT-4,111,184			US-PATENT-CLASS-428-375
					N79-14527* #			US-PATENT-CLASS-428-458
					c 44			US-PATENT-CLASS-428-73
					NASA-CASE-HQN-10888-1			US-PATENT-4,135,019
					US-PATENT-APPL-SN-780057			N79-17029* #
					US-PATENT-CLASS-188-151A			c 31
					US-PATENT-CLASS-188-269			NASA-CASE-GSC-12168-1
								US-PATENT-APPL-SN-838337

		US-PATENT-CLASS-165-30			US-PATENT-4,110,683			US-PATENT-CLASS-340-347DD
		US-PATENT-CLASS-174-15CA			NASA-CASE-LAR-12275-1			US-PATENT-CLASS-364-900
		US-PATENT-CLASS-250-352			US-PATENT-APPL-SN-885065			US-PATENT-4,139,839
		US-PATENT-CLASS-62-514R			US-PATENT-CLASS-356-28			NASA-CASE-NPO-14005-1
		US-PATENT-4,134,447			US-PATENT-CLASS-358-107			US-PATENT-APPL-SN-812447
N79-17133* #	c 33	NASA-CASE-MFS-23659-1			US-PATENT-4,135,817			US-PATENT-CLASS-310-20
		US-PATENT-APPL-SN-782462			NASA-CASE-LAR-12183-1			US-PATENT-CLASS-310-26
		US-PATENT-CLASS-323-44F			US-PATENT-CLASS-331-94.5G			US-PATENT-CLASS-310-322
		US-PATENT-CLASS-336-DIG.1			US-PATENT-CLASS-331-94.5P			US-PATENT-CLASS-310-334
		US-PATENT-4,135,127			US-PATENT-CLASS-788-704			US-PATENT-CLASS-318-116
N79-17134* #	c 33	NASA-CASE-NPO-14426-1			US-PATENT-4,110,703			US-PATENT-CLASS-60-721
		US-PATENT-APPL-SN-009889			NASA-CASE-LEW-12131-1			US-PATENT-CLASS-73-505
N79-17192* #	c 35	NASA-CASE-LEW-11583-1			US-PATENT-APPL-SN-801290			US-PATENT-4,139,806
		US-PATENT-APPL-SN-414042			US-PATENT-CLASS-415-174			NASA-CASE-NPO-14174-1
		US-PATENT-CLASS-55-118			US-PATENT-CLASS-415-200			US-PATENT-APPL-SN-876441
		US-PATENT-CLASS-55-122			US-PATENT-4,135,851			US-PATENT-CLASS-250-237G
		US-PATENT-CLASS-55-127			NASA-CASE-NPO-14058-1			US-PATENT-CLASS-354-77
		US-PATENT-CLASS-55-155			US-PATENT-APPL-SN-824024			US-PATENT-CLASS-356-129
		US-PATENT-CLASS-55-241			US-PATENT-CLASS-126-271			US-PATENT-4,139,291
		US-PATENT-CLASS-55-242			US-PATENT-CLASS-165-105			NASA-CASE-GSC-12263-1
		US-PATENT-CLASS-55-360			US-PATENT-CLASS-60-508			US-PATENT-APPL-SN-817415
		US-PATENT-CLASS-55-407			US-PATENT-CLASS-60-572			US-PATENT-CLASS-250-363R
		US-PATENT-4,134,744			US-PATENT-CLASS-60-641			US-PATENT-CLASS-250-483
N79-17288* #	c 43	NASA-CASE-NPO-13691-1			US-PATENT-4,135,367			US-PATENT-4,142,101
		US-PATENT-APPL-SN-664091			NASA-CASE-LEW-12819-2			NASA-CASE-LAR-10135-1
		US-PATENT-CLASS-250-226			US-PATENT-APPL-SN-863770			US-PATENT-APPL-SN-648034
		US-PATENT-CLASS-356-300			US-PATENT-CLASS-148-6.3			US-PATENT-CLASS-73-147
		US-PATENT-CLASS-356-407			US-PATENT-CLASS-29-572			US-PATENT-3,453,878
		US-PATENT-CLASS-356-416			US-PATENT-CLASS-29-578			NASA-CASE-XLE-03186-1
		US-PATENT-4,134,683			US-PATENT-CLASS-29-591			US-PATENT-APPL-SN-200770
N79-17313* #	c 44	NASA-CASE-LEW-12358-1			US-PATENT-4,135,290			US-PATENT-CLASS-89-8
		US-PATENT-APPL-SN-776146			NASA-CASE-ARC-11035-1			US-PATENT-3,224,337
		US-PATENT-CLASS-429-101			US-PATENT-APPL-SN-758721			NASA-CASE-XMF-06884-1
		US-PATENT-CLASS-429-33			US-PATENT-CLASS-128-2.05Z			US-PATENT-APPL-SN-579300
		US-PATENT-4,133,941			US-PATENT-CLASS-128-2.1A			US-PATENT-CLASS-164-105
N79-17314* #	c 44	NASA-CASE-NPO-13652-1			US-PATENT-CLASS-128-2V			US-PATENT-3,485,290
		US-PATENT-APPL-SN-809890			US-PATENT-4,109,644			NASA-CASE-XMF-05964-1
		US-PATENT-CLASS-136-89CC			NASA-CASE-WOO-00428-1			US-PATENT-APPL-SN-578397
		US-PATENT-CLASS-136-89P			US-PATENT-APPL-SN-112999			US-PATENT-CLASS-60-243
		US-PATENT-CLASS-29-572			US-PATENT-CLASS-117-35			US-PATENT-3,390,528
		US-PATENT-4,133,697			US-PATENT-3,173,801			NASA-CASE-XMF-04592-1
N79-17747* #	c 85	NASA-CASE-NPO-13847-2			NASA-CASE-NPO-14525-1			NASA-CASE-XMF-04593-1
		NASA-CASE-NPO-13848-2			US-PATENT-APPL-SN-017885			US-PATENT-APPL-SN-579376
		US-PATENT-APPL-SN-750798			NASA-CASE-XGS-00829-1			US-PATENT-CLASS-60-39.74
		US-PATENT-CLASS-162-14			US-PATENT-APPL-SN-286824			US-PATENT-3,397,537
		US-PATENT-CLASS-162-29			US-PATENT-CLASS-269-153			NASA-CASE-XMF-02526-1
		US-PATENT-CLASS-210-28			US-PATENT-3,262,694			NASA-CASE-XMF-02527-1
		US-PATENT-CLASS-210-40			NASA-CASE-LEW-12780-1			NASA-CASE-XMF-02783-1
		US-PATENT-CLASS-210-45			US-PATENT-APPL-SN-891370			US-PATENT-APPL-SN-483817
		US-PATENT-CLASS-210-54			US-PATENT-CLASS-323-15			US-PATENT-CLASS-260-2
		US-PATENT-CLASS-210-66			US-PATENT-CLASS-323-20			US-PATENT-3,311,571
		US-PATENT-CLASS-210-67			US-PATENT-4,143,314			NASA-CASE-XMF-06900-1
		US-PATENT-CLASS-210-70			NASA-CASE-GSC-12148-1			US-PATENT-APPL-SN-554959
		US-PATENT-CLASS-210-73R			US-PATENT-APPL-SN-786322			US-PATENT-CLASS-260-67
		US-PATENT-4,134,786			US-PATENT-CLASS-325-58			US-PATENT-3,419,531
N79-17847* #	c 05	NASA-CASE-ARC-11045-1			US-PATENT-CLASS-325-63			NASA-CASE-XLE-02367-1
		US-PATENT-APPL-SN-818916			US-PATENT-CLASS-343-179			US-PATENT-APPL-SN-400857
		US-PATENT-CLASS-416-132R			US-PATENT-4,140,972			US-PATENT-CLASS-222-131
		US-PATENT-CLASS-416-138			NASA-CASE-MSC-16253-1			US-PATENT-3,215,313
		US-PATENT-CLASS-416-51			US-PATENT-APPL-SN-831631			NASA-CASE-MFS-10846-1
		US-PATENT-CLASS-416-88			US-PATENT-CLASS-358-109			US-PATENT-APPL-SN-581843
		US-PATENT-CLASS-416-89			US-PATENT-CLASS-358-81			US-PATENT-CLASS-156-52
		US-PATENT-4,137,010			US-PATENT-CLASS-364-713			US-PATENT-3,481,802
N79-17916* #	c 24	NASA-CASE-LEW-11930-4			US-PATENT-4,139,862			NASA-CASE-XMF-05757-1
		US-PATENT-APPL-SN-860406			NASA-CASE-GSC-12138-1			US-PATENT-APPL-SN-562558
		US-PATENT-CLASS-252-12.2			US-PATENT-APPL-SN-779871			US-PATENT-CLASS-117-43
		US-PATENT-CLASS-308-DIG.8			US-PATENT-CLASS-310-231			US-PATENT-3,511,680
		US-PATENT-CLASS-308-DIG.9			US-PATENT-CLASS-310-46			NASA-CASE-XMF-05373-1
		US-PATENT-CLASS-308-168			US-PATENT-CLASS-310-82			US-PATENT-APPL-SN-474815
		US-PATENT-CLASS-308-171			US-PATENT-4,142,119			US-PATENT-CLASS-335-216
		US-PATENT-CLASS-308-78			NASA-CASE-NPO-14130-1			US-PATENT-3,310,765
		US-PATENT-CLASS-308-87R			US-PATENT-APPL-SN-847278			NASA-CASE-XNP-02899-1
		US-PATENT-CLASS-427-292			US-PATENT-CLASS-415-1			US-PATENT-APPL-SN-472643
		US-PATENT-CLASS-427-327			US-PATENT-CLASS-415-143			US-PATENT-CLASS-317-245
		US-PATENT-CLASS-427-328			US-PATENT-CLASS-60-645			US-PATENT-3,356,917
		US-PATENT-CLASS-427-34			US-PATENT-CLASS-60-649			NASA-CASE-XMS-01295-1
		US-PATENT-CLASS-427-355			US-PATENT-4,141,219			US-PATENT-APPL-SN-77869
		US-PATENT-CLASS-427-376B			NASA-CASE-LEW-11981-2			US-PATENT-CLASS-55-159
		US-PATENT-CLASS-427-376C			US-PATENT-APPL-SN-828315			US-PATENT-3,131,040
		US-PATENT-4,136,211			US-PATENT-CLASS-250-352			NASA-CASE-MSC-12239-1
N79-18052* #	c 27	NASA-CASE-ARC-10915-2			US-PATENT-CLASS-313-22			US-PATENT-APPL-SN-292340
		US-PATENT-APPL-SN-634304			US-PATENT-CLASS-313-35			US-PATENT-CLASS-128.2.07
		US-PATENT-APPL-SN-779883			US-PATENT-CLASS-62-268			US-PATENT-3,396,719
		US-PATENT-CLASS-427-40			US-PATENT-CLASS-62-376			NASA-CASE-XLE-02545-1
		US-PATENT-CLASS-427-41			US-PATENT-CLASS-62-514R			US-PATENT-APPL-SN-430748
		US-PATENT-CLASS-428-412			US-PATENT-4,141,224			US-PATENT-CLASS-156-17
		US-PATENT-CLASS-428-447			NASA-CASE-MSC-19514-1			US-PATENT-3,429,756
		US-PATENT-CLASS-428-451			US-PATENT-APPL-SN-772188			NASA-CASE-LEW-12513-1
		US-PATENT-4,137,365			US-PATENT-CLASS-74-674			US-PATENT-APPL-SN-772167
N79-18193* #	c 33	NASA-CASE-KSC-10899-1			US-PATENT-CLASS-74-705			US-PATENT-CLASS-195-103.5R
		US-PATENT-APPL-SN-814004			US-PATENT-CLASS-74-764			US-PATENT-CLASS-195-127
		US-PATENT-CLASS-324-127			US-PATENT-4,141,259			US-PATENT-CLASS-204-1T
		US-PATENT-CLASS-324-133			NASA-CASE-NPO-14521-1			US-PATENT-CLASS-2041-195B
		US-PATENT-CLASS-324-52			US-PATENT-APPL-SN-023439			US-PATENT-4,145,255
		US-PATENT-CLASS-340-650			NASA-CASE-NPO-13876-1			NASA-CASE-LEW-12542-2
		US-PATENT-CLASS-340-664			US-PATENT-APPL-SN-779415			US-PATENT-APPL-SN-803822

		US-PATENT-APPL-SN-860405				US-PATENT-4,149,938			US-PATENT-APPL-SN-322997
		US-PATENT-CLASS-148-12.4	N79-24203* #	c 32	NASA-CASE-LAR-12375-1				US-PATENT-APPL-SN-506803
		US-PATENT-CLASS-148-12F			US-PATENT-APPL-SN-900842				US-PATENT-APPL-SN-645502
		US-PATENT-CLASS-148-2			US-PATENT-CLASS-73-647				US-PATENT-CLASS-156-89
		US-PATENT-4,146,409			US-PATENT-CLASS-73-724				US-PATENT-CLASS-220-2.2
N79-22300* #	c 27	NASA-CASE-ARC-11060-1			US-PATENT-4,149,423				US-PATENT-CLASS-65-43
		US-PATENT-APPL-SN-843090	N79-24210* #	c 32	NASA-CASE-NPO-13641-1				US-PATENT-3,859,714
		US-PATENT-CLASS-260-307G			US-PATENT-APPL-SN-777983				US-PATENT-4,155,475
		US-PATENT-CLASS-528-401			US-PATENT-CLASS-343-100TD	N79-25443* #	c 43	NASA-CASE-MFS-23720-3	
		US-PATENT-CLASS-528-422			US-PATENT-4,148,031			US-PATENT-APPL-SN-848420	
		US-PATENT-4,145,524	N79-24254* #	c 33	NASA-CASE-NPO-14000-1			US-PATENT-CLASS-73-12	
N79-22373* #	c 33	NASA-CASE-KSC-11008-1			US-PATENT-APPL-SN-878431			US-PATENT-CLASS-73-82	
		US-PATENT-APPL-SN-780729			US-PATENT-CLASS-307-82			US-PATENT-4,154,084	
		US-PATENT-CLASS-324-123C			US-PATENT-CLASS-363-56	N79-25481* #	c 44	NASA-CASE-LEW-12972-1	
		US-PATENT-CLASS-324-99D			US-PATENT-CLASS-363-71			US-PATENT-APPL-SN-897829	
		US-PATENT-CLASS-330-2			US-PATENT-CLASS-363-97			US-PATENT-CLASS-429-253	
		US-PATENT-CLASS-330-51			US-PATENT-4,150,425			US-PATENT-CLASS-526-7	
		US-PATENT-CLASS-330-86	N79-24257* #	c 33	NASA-CASE-NPO-14056-1			US-PATENT-CLASS-526-9	
		US-PATENT-4,109,213			US-PATENT-APPL-SN-833637			US-PATENT-4,154,912	
N79-22474* #	c 37	NASA-CASE-MFS-23646-1			US-PATENT-CLASS-363-134	N79-25482* #	c 44	NASA-CASE-NPO-14199-1	
		US-PATENT-APPL-SN-891372			US-PATENT-CLASS-363-71			NASA-CASE-NPO-14200-1	
		US-PATENT-CLASS-138-96R			US-PATENT-CLASS-363-95			US-PATENT-APPL-SN-891243	
		US-PATENT-CLASS-220-266			US-PATENT-4,149,233			US-PATENT-CLASS-136-89CA	
		US-PATENT-CLASS-239-265.15	N79-24285* #	c 34	NASA-CASE-MSC-16841-1			US-PATENT-CLASS-136-89CC	
		US-PATENT-CLASS-239-288			US-PATENT-APPL-SN-893382			US-PATENT-CLASS-136-89PC	
		US-PATENT-CLASS-277-192			US-PATENT-CLASS-210-108			US-PATENT-CLASS-136-89SJ	
		US-PATENT-4,146,180			US-PATENT-CLASS-210-142			US-PATENT-4,153,476	
N79-22475* #	c 37	NASA-CASE-LEW-11873-1			US-PATENT-CLASS-73-714	N79-26075* #	c 12	NASA-CASE-MFS-23460-1	
		US-PATENT-APPL-SN-814006			US-PATENT-4,151,086			US-PATENT-APPL-SN-746578	
		US-PATENT-CLASS-277-62	N79-24431* #	c 44	NASA-CASE-NPO-13652-2			US-PATENT-CLASS-13-20	
		US-PATENT-CLASS-277-96.1			US-PATENT-APPL-SN-848794			US-PATENT-CLASS-13-22	
		US-PATENT-4,145,058			US-PATENT-CLASS-228-5.1			US-PATENT-CLASS-13-24	
N79-22537* #	c 39	NASA-CASE-LAR-12027-1			US-PATENT-CLASS-228-6			US-PATENT-CLASS-219-410	
		US-PATENT-APPL-SN-889670			US-PATENT-CLASS-29-57.4			US-PATENT-4,158,742	
		US-PATENT-CLASS-73-770			US-PATENT-CLASS-29-572	N79-26100* #	c 15	NASA-CASE-ARC-11104-1	
		US-PATENT-CLASS-73-810			US-PATENT-CLASS-29-739			US-PATENT-APPL-SN-854920	
		US-PATENT-4,145,933			US-PATENT-CLASS-29-809			US-PATENT-CLASS-244-121	
N79-22679* #	c 46	NASA-CASE-NPO-14112-1			US-PATENT-4,149,665			US-PATENT-CLASS-260-37EP	
		US-PATENT-APPL-SN-826326	N79-24432* #	c 44	NASA-CASE-NPO-13579-3			US-PATENT-CLASS-260-830S	
		US-PATENT-CLASS-102-21.6			US-PATENT-APPL-SN-762363			US-PATENT-CLASS-264-102	
		US-PATENT-CLASS-166-63			US-PATENT-CLASS-126-270			US-PATENT-CLASS-264-145	
		US-PATENT-CLASS-175-1			US-PATENT-CLASS-264-1			US-PATENT-CLASS-264-151	
		US-PATENT-CLASS-181-106			US-PATENT-CLASS-264-33			US-PATENT-CLASS-264-175	
		US-PATENT-CLASS-181-117			US-PATENT-CLASS-264-34			US-PATENT-CLASS-264-236	
		US-PATENT-4,148,375			US-PATENT-CLASS-264-35			US-PATENT-CLASS-428-220	
N79-23097* #	c 08	NASA-CASE-LAR-12215-1			US-PATENT-CLASS-264-510			US-PATENT-CLASS-428-413	
		US-PATENT-APPL-SN-858762			US-PATENT-CLASS-264-516			US-PATENT-CLASS-428-414	
		US-PATENT-CLASS-244-17.13			US-PATENT-CLASS-264-70			US-PATENT-CLASS-428-418	
		US-PATENT-CLASS-244-195			US-PATENT-CLASS-264-71			US-PATENT-CLASS-428-421	
		US-PATENT-CLASS-244-83G			US-PATENT-CLASS-350-292			US-PATENT-CLASS-428-920	
		US-PATENT-CLASS-318-585			US-PATENT-CLASS-350-294			US-PATENT-4,156,752	
		US-PATENT-CLASS-318-616			US-PATENT-CLASS-350-296	N79-26372* #	c 35	NASA-CASE-LAR-11889-1	
		US-PATENT-CLASS-364-434			US-PATENT-CLASS-405-229			US-PATENT-APPL-SN-862182	
		US-PATENT-4,148,452			US-PATENT-CLASS-405-263			US-PATENT-CLASS-308-10	
N79-23310* #	c 32	NASA-CASE-KSC-11023-1			US-PATENT-4,149,817			US-PATENT-CLASS-73-178R	
		US-PATENT-APPL-SN-918533	N79-24433* #	c 44	NASA-CASE-NPO-13579-2			US-PATENT-4,156,548	
		US-PATENT-CLASS-179-1MN			US-PATENT-APPL-SN-762362			NASA-CASE-MFS-23726-1	
		US-PATENT-CLASS-179-27CA			US-PATENT-CLASS-126-271	N79-26439* #	c 43	US-PATENT-APPL-SN-848418	
		US-PATENT-CLASS-179-84VF			US-PATENT-CLASS-126-400			US-PATENT-CLASS-105-161	
		US-PATENT-4,153,818			US-PATENT-CLASS-237-1A			US-PATENT-CLASS-299-1	
N79-23345* #	c 33	NASA-CASE-FRC-10116-1			US-PATENT-CLASS-350-288			US-PATENT-CLASS-33-1N	
		US-PATENT-APPL-SN-885049			US-PATENT-CLASS-350-299			US-PATENT-CLASS-33-1Q	
		US-PATENT-CLASS-323-22T			US-PATENT-4,149,521			US-PATENT-CLASS-33-174L	
		US-PATENT-4,151,456	N79-24651* #	c 54	NASA-CASE-ARC-11058-2			US-PATENT-CLASS-364-560	
N79-23481* #	c 44	NASA-CASE-MFS-23349-1			US-PATENT-APPL-SN-753965			US-PATENT-4,156,971	
		US-PATENT-APPL-SN-823061			US-PATENT-APPL-SN-883094	N79-26474* #	c 44	NASA-CASE-LEW-13150-1	
		US-PATENT-CLASS-126-270			US-PATENT-CLASS-2-2.1A			US-PATENT-APPL-SN-914260	
		US-PATENT-CLASS-126-271			US-PATENT-CLASS-285-235			US-PATENT-CLASS-429-101	
		US-PATENT-4,148,295			US-PATENT-4,091,464			US-PATENT-CLASS-429-15	
N79-23555* #	c 46	NASA-CASE-NPO-14255-1			US-PATENT-4,151,612			US-PATENT-4,159,366	
		US-PATENT-APPL-SN-830458	N79-24652* #	c 54	NASA-CASE-NPO-13906-1			NASA-CASE-MFS-23540-1	
		US-PATENT-CLASS-181-115			US-PATENT-APPL-SN-837259	N79-26475* #	c 44	US-PATENT-APPL-SN-863773	
		US-PATENT-CLASS-181-120			US-PATENT-CLASS-3-1.1			US-PATENT-CLASS-29-572	
		US-PATENT-CLASS-340-12R			US-PATENT-CLASS-3-12.5			US-PATENT-CLASS-29-577	
		US-PATENT-4,153,134			US-PATENT-CLASS-414-6			US-PATENT-CLASS-29-578	
N79-23753* #	c 71	NASA-CASE-NPO-14134-1			US-PATENT-4,149,278			US-PATENT-CLASS-29-580	
		US-PATENT-APPL-SN-861392	N79-24976* #	c 05	NASA-CASE-LEW-11890-1			US-PATENT-CLASS-357-45	
		US-PATENT-CLASS-179-1DM			US-PATENT-APPL-SN-891244			US-PATENT-4,156,309	
		US-PATENT-CLASS-179-1MF			US-PATENT-CLASS-137-15.1	N79-26771* #	c 52	NASA-CASE-ARC-10994-2	
		US-PATENT-CLASS-181-148			US-PATENT-CLASS-244-53B			US-PATENT-APPL-SN-759965	
		US-PATENT-CLASS-340-8LF			US-PATENT-4,154,256			US-PATENT-CLASS-128-660	
		US-PATENT-4,149,034	N79-25142* #	c 24	NASA-CASE-MSC-12737-1			US-PATENT-CLASS-73-626	
N79-23798* #	c 76	NASA-CASE-NPO-13969-1			US-PATENT-APPL-SN-788045			US-PATENT-4,154,230	
		US-PATENT-APPL-SN-820499			US-PATENT-CLASS-102-105	N79-26772* #	c 52	NASA-CASE-KSC-11069-1	
		US-PATENT-CLASS-156-DIG.6.8			US-PATENT-CLASS-244-121			US-PATENT-APPL-SN-876438	
		US-PATENT-CLASS-156-61TSP			US-PATENT-CLASS-244-163			US-PATENT-CLASS-3-1.9	
		US-PATENT-CLASS-423-345			US-PATENT-CLASS-427-350			US-PATENT-CLASS-3-12	
		US-PATENT-4,152,194			US-PATENT-CLASS-427-372A			US-PATENT-CLASS-3-2	
N79-24062* #	c 24	NASA-CASE-ARC-11169-1			US-PATENT-CLASS-428-137			US-PATENT-4,158,895	
		US-PATENT-APPL-SN-940688			US-PATENT-CLASS-428-282	N79-27836* #	c 52	NASA-CASE-NPO-13910-1	
		US-PATENT-CLASS-428-366			US-PATENT-CLASS-428-290			US-PATENT-APPL-SN-712270	
		US-PATENT-4,148,962			US-PATENT-CLASS-428-332			US-PATENT-CLASS-128-329R	
N79-24073* #	c 25	NASA-CASE-LAR-11922-1			US-PATENT-CLASS-428-447			US-PATENT-CLASS-128-639	
		US-PATENT-APPL-SN-856460			US-PATENT-CLASS-428-920			US-PATENT-4,154,228	
		US-PATENT-CLASS-195-127			US-PATENT-4,151,800	N79-28253* #	c 25	NASA-CASE-NPO-13650-1	
		US-PATENT-CLASS-204-195B	N79-25143* #	c 24	NASA-CASE-GSC-11577-3			US-PATENT-APPL-SN-704468	

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			US-PATENT-APPL-SN-848421	US-PATENT-APPL-SN-017888	N80-18393* #	c 37	NASA-CASE-ARC-11157-1
			US-PATENT-CLASS-73-12	US-PATENT-CLASS-204-180R			US-PATENT-APPL-SN-935827
			US-PATENT-CLASS-73-82	US-PATENT-CLASS-204-299R			US-PATENT-CLASS-220-423
			US-PATENT-4,157,655	US-PATENT-CLASS-424-12			US-PATENT-CLASS-220-445
N80-14472* #	c 44		NASA-CASE-LEW-12586-1	US-PATENT-4,181,589			US-PATENT-CLASS-220-901
			US-PATENT-APPL-SN-916655	N80-16725* #	c 52		US-PATENT-4,184,609
			US-PATENT-CLASS-307-63				NASA-CASE-NPO-12131-3
			US-PATENT-CLASS-307-66	US-PATENT-APPL-SN-807597			US-PATENT-APPL-SN-096255
			US-PATENT-CLASS-323-15	US-PATENT-CLASS-128-DIG.9	N80-18400* #	c 37	NASA-CASE-LAR-11695-2
			US-PATENT-CLASS-323-19	US-PATENT-CLASS-128-348			US-PATENT-APPL-SN-103836
			US-PATENT-4,175,249	US-PATENT-CLASS-128-6	N80-18498* #	c 43	NASA-CASE-LAR-12344-1
N80-14473* #	c 44		NASA-CASE-MFS-23727-1	US-PATENT-CLASS-138-103			US-PATENT-APPL-SN-945041
			US-PATENT-APPL-SN-856465	US-PATENT-CLASS-138-133			US-PATENT-CLASS-343-188
			US-PATENT-CLASS-126-438	US-PATENT-CLASS-138-33			US-PATENT-CLASS-343-18D
			US-PATENT-CLASS-126-442	US-PATENT-CLASS-219-201			US-PATENT-CLASS-343-5CM
			US-PATENT-CLASS-350-295	US-PATENT-CLASS-219-522			US-PATENT-CLASS-343-5W
			US-PATENT-CLASS-350-296	US-PATENT-4,176,662			US-PATENT-4,184,155
			US-PATENT-4,173,397	N80-18036* #	c 06		NASA-CASE-NPO-14303-1
N80-14474* #	c 44		NASA-CASE-NPO-13652-3				NASA-CASE-NPO-14305-1
			US-PATENT-APPL-SN-809890	US-PATENT-APPL-SN-910708			US-PATENT-APPL-SN-928133
			US-PATENT-APPL-SN-891358	US-PATENT-CLASS-340-177VA			US-PATENT-CLASS-156-104
			US-PATENT-CLASS-136-89P	US-PATENT-CLASS-73-188			US-PATENT-CLASS-156-278
			US-PATENT-CLASS-29-572	US-PATENT-CLASS-73-189			US-PATENT-CLASS-156-285
			US-PATENT-CLASS-29-588	US-PATENT-CLASS-73-212			US-PATENT-CLASS-156-303
			US-PATENT-CLASS-29-627	US-PATENT-4,184,149			US-PATENT-CLASS-156-312
			US-PATENT-4,133,697	N80-18039* #	c 07		US-PATENT-4,184,903
			US-PATENT-4,173,820				NASA-CASE-NPO-14096-1
N80-14579* #	c 45		NASA-CASE-NPO-14340-1	US-PATENT-APPL-SN-858936			US-PATENT-APPL-SN-928128
			US-PATENT-APPL-SN-946992	US-PATENT-CLASS-60-240			US-PATENT-CLASS-324-158D
			US-PATENT-CLASS-210-57	US-PATENT-CLASS-60-39.03			US-PATENT-CLASS-324-404
			US-PATENT-CLASS-210-63Z	US-PATENT-CLASS-60-39.27			US-PATENT-4,184,111
			US-PATENT-CLASS-422-9	US-PATENT-4,184,327			NASA-CASE-LAR-11999-1
			US-PATENT-4,172,786	N80-18097* #	c 20		US-PATENT-APPL-SN-876299
N80-14603* #	c 46		NASA-CASE-NPO-14124-1				US-PATENT-CLASS-250-211K
			US-PATENT-APPL-SN-863024	NASA-CASE-NPO-14382-1			US-PATENT-CLASS-250-231SE
			US-PATENT-CLASS-343-100ME	US-PATENT-APPL-SN-891373			US-PATENT-4,184,072
			US-PATENT-CLASS-343-112D	US-PATENT-CLASS-261-118			NASA-CASE-MFS-23862-1
			US-PATENT-4,170,776	US-PATENT-CLASS-422-224			US-PATENT-APPL-SN-951423
N80-14684* #	c 52		NASA-CASE-LEW-12955-1	US-PATENT-CLASS-423-350			US-PATENT-CLASS-73-170A
			US-PATENT-APPL-SN-829318	US-PATENT-4,188,368			US-PATENT-4,184,368
			US-PATENT-CLASS-128-276	N80-18252* #	c 32		NASA-CASE-LEW-12723-1
			US-PATENT-4,157,718				US-PATENT-APPL-SN-829317
N80-14687* #	c 52		NASA-CASE-NPO-14101-1	US-PATENT-APPL-SN-899828			US-PATENT-CLASS-128-276
			US-PATENT-APPL-SN-772434	US-PATENT-CLASS-178-58R			US-PATENT-CLASS-128-760
			US-PATENT-CLASS-210-22	US-PATENT-CLASS-179-15BA			US-PATENT-4,184,491
			US-PATENT-CLASS-210-321B	US-PATENT-4,187,394			NASA-CASE-ARC-11120-1
			US-PATENT-4,094,775	N80-18253* #	c 32		US-PATENT-APPL-SN-796256
N80-14877* #	c 72		NASA-CASE-NPO-14078-1				US-PATENT-CLASS-128-748
			US-PATENT-APPL-SN-856466	NASA-CASE-NPO-14328-1			US-PATENT-CLASS-128-903
			US-PATENT-CLASS-250-281	NASA-CASE-NPO-14579-1			US-PATENT-CLASS-73-724
			US-PATENT-CLASS-250-282	NASA-CASE-NPO-14590-1			US-PATENT-4,186,749
			US-PATENT-CLASS-250-423P	US-PATENT-APPL-SN-956160			NASA-CASE-GSC-12291-1
			US-PATENT-4,158,775	US-PATENT-CLASS-325-305			US-PATENT-APPL-SN-906298
N80-16116* #	c 25		NASA-CASE-ARC-11107-1	US-PATENT-CLASS-325-307			US-PATENT-CLASS-269-21
			US-PATENT-APPL-SN-883961	US-PATENT-CLASS-325-419			US-PATENT-CLASS-51-235
			US-PATENT-CLASS-521-124	US-PATENT-4,186,347			US-PATENT-CLASS-83-152
			US-PATENT-CLASS-521-125	N80-18285* #	c 33		US-PATENT-CLASS-83-870
			US-PATENT-CLASS-521-127				US-PATENT-4,184,472
			US-PATENT-CLASS-521-157	NASA-CASE-NPO-14229-1			NASA-CASE-MSC-18172-1
			US-PATENT-CLASS-528-73	US-PATENT-APPL-SN-835419			US-PATENT-APPL-SN-119334
N80-16158* #	c 27		US-PATENT-4,177,333	US-PATENT-APPL-SN-949886			NASA-CASE-LEW-12296-1
			NASA-CASE-LAR-12099-1	US-PATENT-CLASS-200-153S			US-PATENT-APPL-SN-122966
			US-PATENT-APPL-SN-906299	US-PATENT-CLASS-200-304			NASA-CASE-LAR-12261-1
			US-PATENT-CLASS-528-207	US-PATENT-CLASS-333-262			US-PATENT-APPL-SN-964009
			US-PATENT-CLASS-528-208	US-PATENT-4,187,416			US-PATENT-CLASS-73-147
			US-PATENT-4,180,648	N80-18286* #	c 33		US-PATENT-CLASS-73-205L
N80-16163* #	c 27		NASA-CASE-NPO-14021-2				US-PATENT-4,188,823
			US-PATENT-APPL-SN-106188	NASA-CASE-GSC-12347-1			NASA-CASE-NPO-14079-1
N80-16261* #	c 32		NASA-CASE-NPO-14362-1	US-PATENT-APPL-SN-868249			US-PATENT-APPL-SN-958573
			US-PATENT-APPL-SN-106118	US-PATENT-CLASS-174-142			US-PATENT-CLASS-250-307
N80-16321* #	c 36		NASA-CASE-LAR-12176-1	US-PATENT-CLASS-174-73R			US-PATENT-CLASS-250-308
			US-PATENT-APPL-SN-929083	US-PATENT-4,185,164			US-PATENT-4,194,115
			US-PATENT-CLASS-332-751	N80-18287* #	c 33		NASA-CASE-LEW-12081-2
			US-PATENT-CLASS-350-359				US-PATENT-APPL-SN-676432
			US-PATENT-CLASS-356-243	NASA-CASE-NPO-14224-1			US-PATENT-APPL-SN-837794
			US-PATENT-CLASS-356-28	US-PATENT-APPL-SN-951829			US-PATENT-CLASS-149-1
			US-PATENT-4,176,950	US-PATENT-CLASS-310-306			US-PATENT-CLASS-423-848R
N80-16452* #	c 44		NASA-CASE-MFS-23518-3	US-PATENT-CLASS-343-100R			US-PATENT-4,193,827
			US-PATENT-APPL-SN-829390	US-PATENT-CLASS-343-100ST			NASA-CASE-NPO-14480-1
			US-PATENT-APPL-SN-910793	US-PATENT-4,187,506			US-PATENT-APPL-SN-910707
			US-PATENT-CLASS-126-417	N80-18357* #	c 35		US-PATENT-CLASS-325-14
			US-PATENT-CLASS-126-901				US-PATENT-CLASS-325-4
			US-PATENT-CLASS-428-629	US-PATENT-CLASS-264-40.4			US-PATENT-CLASS-325-8
			US-PATENT-CLASS-428-650	US-PATENT-CLASS-73-343R			US-PATENT-CLASS-325-9
			US-PATENT-CLASS-428-658	US-PATENT-CLASS-73-56			US-PATENT-4,189,675
			US-PATENT-CLASS-428-675	US-PATENT-4,185,493			NASA-CASE-LEW-13148-1
			US-PATENT-CLASS-428-680	N80-18358* #	c 35		US-PATENT-APPL-SN-964754
			US-PATENT-4,104,134				US-PATENT-CLASS-429-101
			US-PATENT-4,177,325	US-PATENT-APPL-SN-934576			US-PATENT-CLASS-429-105
N80-16714* #	c 51		NASA-CASE-MSC-16260-1	US-PATENT-CLASS-73-4R			US-PATENT-CLASS-429-107
			US-PATENT-APPL-SN-876440	US-PATENT-CLASS-73-40			US-PATENT-CLASS-429-109
			US-PATENT-CLASS-23-927	US-PATENT-4,182,158			US-PATENT-4,192,910
			US-PATENT-CLASS-422-52	N80-18359* #	c 35		NASA-CASE-LAR-12304-1
			US-PATENT-CLASS-435-34				US-PATENT-APPL-SN-928130
			US-PATENT-4,176,007	US-PATENT-APPL-SN-876432			US-PATENT-CLASS-29-25.35
N80-16715* #	c 51		NASA-CASE-MFS-23883-1	US-PATENT-CLASS-330-4			
				US-PATENT-CLASS-331-94			
				US-PATENT-CLASS-333-24R			
				US-PATENT-4,187,470			

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			US-PATENT-APPL-SN-039031				US-PATENT-CLASS-427-44				US-PATENT-CLASS-428-413
			US-PATENT-CLASS-343-1005A				US-PATENT-CLASS-428-500				US-PATENT-CLASS-428-480
			US-PATENT-CLASS-343-844				US-PATENT-CLASS-429-139				US-PATENT-CLASS-428-902
			US-PATENT-CLASS-343-854				US-PATENT-4,218,280				US-PATENT-4,229,473
			US-PATENT-4,213,131				NASA-CASE-GSC-12191-1		N81-14015* #	c 25	NASA-CASE-NPO-14143-1
N80-28686* #	c 35		NASA-CASE-LAR-11370-1		N80-32583* #	c 31	US-PATENT-APPL-SN-009886				US-PATENT-APPL-SN-938297
			US-PATENT-APPL-SN-940689				US-PATENT-CLASS-165-16				US-PATENT-CLASS-250-343
			US-PATENT-CLASS-250-457				US-PATENT-CLASS-236-13				US-PATENT-CLASS-356-437
			US-PATENT-CLASS-250-491				US-PATENT-CLASS-236-44C				US-PATENT-4,234,258
			US-PATENT-CLASS-250-513				US-PATENT-CLASS-238-49		N81-14016* #	c 25	NASA-CASE-ARC-11241-1
			US-PATENT-4,213,051				US-PATENT-4,210,278				US-PATENT-APPL-SN-037066
N80-28687* #	c 35		NASA-CASE-LAR-12285-1		N80-32584* #	c 31	NASA-CASE-NPO-14191-1				US-PATENT-CLASS-260-33.8F
			US-PATENT-APPL-SN-929087				US-PATENT-APPL-SN-830846				US-PATENT-CLASS-528-362
			US-PATENT-CLASS-356-244				US-PATENT-CLASS-181-102				US-PATENT-CLASS-528-401
			US-PATENT-CLASS-356-369				US-PATENT-CLASS-367-27				US-PATENT-CLASS-528-422
			US-PATENT-4,210,401				US-PATENT-CLASS-367-36				US-PATENT-4,234,715
N80-28711* #	c 37		NASA-CASE-LEW-12119-1				US-PATENT-CLASS-367-57		N81-14076* #	c 27	NASA-CASE-NPO-14001-1
			US-PATENT-APPL-SN-672219				US-PATENT-4,214,226				US-PATENT-APPL-SN-771245
			US-PATENT-CLASS-277-153		N80-32604* #	c 32	NASA-CASE-MSC-18334-1				US-PATENT-CLASS-210-24R
			US-PATENT-CLASS-277-193				US-PATENT-APPL-SN-051270				US-PATENT-CLASS-260-17A
			US-PATENT-CLASS-277-224				US-PATENT-CLASS-343-700MS				US-PATENT-CLASS-260-2 1F
			US-PATENT-4,212,477				US-PATENT-CLASS-343-830				US-PATENT-CLASS-260-858
N80-29539* #	c 32		NASA-CASE-LAR-11745-1				US-PATENT-4,218,682				US-PATENT-CLASS-260-886
			US-PATENT-APPL-SN-799025		N80-32605* #	c 32	NASA-CASE-NPO-14253-1				US-PATENT-CLASS-260-8900
			US-PATENT-CLASS-343-786				NASA-CASE-NPO-14640-1				US-PATENT-CLASS-260-895
			US-PATENT-4,089,004				US-PATENT-APPL-SN-938293				US-PATENT-CLASS-260-898
N80-29583* #	c 33		NASA-CASE-FRC-11055-1				US-PATENT-CLASS-333-12				US-PATENT-CLASS-260-901
			US-PATENT-APPL-SN-172098				US-PATENT-CLASS-333-252				US-PATENT-CLASS-521-27
N80-29703* #	c 37		NASA-CASE-NPO-14406-1				US-PATENT-CLASS-333-995				US-PATENT-CLASS-521-32
			US-PATENT-APPL-SN-951828				US-PATENT-4,215,327				US-PATENT-CLASS-521-62
			US-PATENT-CLASS-125-21		N80-32650* #	c 33	NASA-CASE-NPO-14424-1				US-PATENT-4,119,581
			US-PATENT-CLASS-83-820				NASA-CASE-NPO-14430-1		N81-14077* #	c 27	NASA-CASE-MSC-12631-3
			US-PATENT-4,191,159				US-PATENT-APPL-SN-918534				US-PATENT-APPL-SN-006952
N80-29834* #	c 44		NASA-CASE-LAR-11551-1				US-PATENT-CLASS-324-62				US-PATENT-APPL-SN-568541
			US-PATENT-APPL-SN-883090				US-PATENT-CLASS-324-64				US-PATENT-APPL-SN-785279
			US-PATENT-CLASS-290-53				US-PATENT-4,218,650				US-PATENT-CLASS-156-154
			US-PATENT-CLASS-310-30		N80-32716* #	c 37	NASA-CASE-MFS-23777-1				US-PATENT-CLASS-156-160
			US-PATENT-4,191,893				US-PATENT-APPL-SN-931217				US-PATENT-CLASS-156-163
N80-29835* #	c 44		NASA-CASE-NPO-13786-1				US-PATENT-CLASS-318-15				US-PATENT-CLASS-156-212
			US-PATENT-APPL-SN-696374				US-PATENT-CLASS-74-425				US-PATENT-CLASS-156-267
			US-PATENT-CLASS-148-1.5				US-PATENT-CLASS-74-661				US-PATENT-CLASS-156-295
			US-PATENT-CLASS-357-30				US-PATENT-CLASS-74-665C				US-PATENT-CLASS-156-323
			US-PATENT-CLASS-357-52				US-PATENT-4,215,592				US-PATENT-CLASS-156-331
			US-PATENT-CLASS-357-91		N80-32717* #	c 37	NASA-CASE-GSC-12289-1				US-PATENT-4,032,089
			US-PATENT-4,090,213				US-PATENT-APPL-SN-943086				US-PATENT-4,225,372
N80-31790* #	c 37		NASA-CASE-LEW-12274-1				US-PATENT-CLASS-198-847		N81-14078* #	c 27	NASA-CASE-LAR-12054-2
			US-PATENT-APPL-SN-950876				US-PATENT-CLASS-198-848				US-PATENT-APPL-SN-011737
			US-PATENT-CLASS-417-383				US-PATENT-CLASS-474-205				US-PATENT-APPL-SN-839963
			US-PATENT-CLASS-60-520				US-PATENT-4,215,590				US-PATENT-CLASS-264-137
			US-PATENT-4,215,548		N80-33081* #	c 52	NASA-CASE-ARC-11258-1				US-PATENT-CLASS-427-385.5
N80-32244* #	c 76		NASA-CASE-NPO-14298-1				US-PATENT-APPL-SN-185865				US-PATENT-CLASS-427-429
			US-PATENT-APPL-SN-938579		N80-33186* #	c 72	NASA-CASE-LEW-12940-1				US-PATENT-CLASS-428-473.5
			US-PATENT-CLASS-156-DIG.96				US-PATENT-APPL-SN-953391				US-PATENT-4,166,170
			US-PATENT-CLASS-422-246				US-PATENT-CLASS-313-231.4				US-PATENT-4,233,258
			US-PATENT-4,216,186				US-PATENT-CLASS-313-362		N81-14103* #	c 28	NASA-CASE-LEW-12081-3
N80-32245* #	c 76		NASA-CASE-NPO-14295-1				US-PATENT-4,218,633				US-PATENT-APPL-SN-009887
			US-PATENT-APPL-SN-901055		N80-33210* #	c 74	NASA-CASE-MSC-18255-1				US-PATENT-APPL-SN-676432
			US-PATENT-CLASS-156-DIG.64				US-PATENT-APPL-SN-025163				US-PATENT-APPL-SN-837794
			US-PATENT-CLASS-156-DIG.88				US-PATENT-CLASS-250-347				US-PATENT-CLASS-149-1
			US-PATENT-CLASS-156-601				US-PATENT-CLASS-250-352				US-PATENT-CLASS-156-344
			US-PATENT-CLASS-156-617SP				US-PATENT-CLASS-250-353				US-PATENT-CLASS-423-648R
			US-PATENT-4,217,165				US-PATENT-CLASS-350-55				US-PATENT-CLASS-44-7R
N80-32359* #	c 04		NASA-CASE-NPO-14173-1				US-PATENT-CLASS-356-72				US-PATENT-CLASS-55-2
			US-PATENT-APPL-SN-938581				US-PATENT-4,215,273				US-PATENT-CLASS-62-12
			US-PATENT-CLASS-343-112R		N80-33482* #	c 24	NASA-CASE-LEW-11930-3				US-PATENT-CLASS-62-18
			US-PATENT-4,215,345				US-PATENT-APPL-SN-513811				US-PATENT-CLASS-62-40
N80-32392* #	c 07		NASA-CASE-ARC-10977-1				US-PATENT-APPL-SN-616528				US-PATENT-CLASS-62-47
			US-PATENT-APPL-SN-023436				US-PATENT-APPL-SN-764245				US-PATENT-4,077,788
			US-PATENT-CLASS-239-127.3				US-PATENT-CLASS-75-200				US-PATENT-4,193,827
			US-PATENT-CLASS-239-265.33				US-PATENT-CLASS-75-222				US-PATENT-4,229,196
			US-PATENT-CLASS-60-264		N81-12330* #	c 33	US-PATENT-4,214,905		N81-14137* #	c 31	NASA-CASE-KSC-11064-1
			US-PATENT-4,214,703				NASA-CASE-MFS-25535-1				US-PATENT-APPL-SN-897840
N80-32484* #	c 26		NASA-CASE-LEW-12542-3				US-PATENT-APPL-SN-199765				US-PATENT-CLASS-169-62
			US-PATENT-APPL-SN-007083		N81-12542* #	c 44	NASA-CASE-LEW-12806-2				US-PATENT-CLASS-169-70
			US-PATENT-APPL-SN-803822				US-PATENT-APPL-SN-065676				US-PATENT-4,219,084
			US-PATENT-CLASS-75-124				US-PATENT-APPL-SN-915050		N81-14185* #	c 32	NASA-CASE-NPO-14536-1
			US-PATENT-4,214,902				US-PATENT-CLASS-136-249				US-PATENT-APPL-SN-974471
N80-32514* #	c 27		NASA-CASE-NPO-13137-1				US-PATENT-CLASS-136-291				US-PATENT-CLASS-343-100TD
			US-PATENT-APPL-SN-332123				US-PATENT-CLASS-363-147				US-PATENT-4,233,606
			US-PATENT-APPL-SN-374810				US-PATENT-CLASS-363-27		N81-14186* #	c 32	NASA-CASE-NPO-14749-1
			US-PATENT-CLASS-568-852				US-PATENT-CLASS-363-60				US-PATENT-APPL-SN-078521
			US-PATENT-CLASS-568-861				US-PATENT-4,217,633				US-PATENT-CLASS-375-107
			US-PATENT-4,118,427		N81-13999* #	c 24	NASA-CASE-ARC-11174-1				US-PATENT-CLASS-455-51
N80-32515* #	c 27		NASA-CASE-NPO-13899-1				US-PATENT-APPL-SN-929086				US-PATENT-CLASS-455-619
			US-PATENT-APPL-SN-761252				US-PATENT-CLASS-260-17.2				US-PATENT-CLASS-455-71
			US-PATENT-APPL-SN-933186				US-PATENT-CLASS-428-114				US-PATENT-4,234,971
			US-PATENT-CLASS-260-346.3				US-PATENT-CLASS-428-528		N81-14187* #	c 32	NASA-CASE-MSC-16800-1
			US-PATENT-4,196,129				US-PATENT-CLASS-428-541				US-PATENT-APPL-SN-953313
N80-32516* #	c 27		NASA-CASE-LEW-13103-1				US-PATENT-CLASS-428-921				US-PATENT-CLASS-343-727
			US-PATENT-APPL-SN-971596				US-PATENT-4,209,561				US-PATENT-CLASS-343-789
			US-PATENT-CLASS-156-272		N81-14000* #	c 24	NASA-CASE-LAR-12065-1				US-PATENT-CLASS-343-797
			US-PATENT-CLASS-156-292				US-PATENT-APPL-SN-889671				US-PATENT-4,218,685
			US-PATENT-CLASS-204-159.11				US-PATENT-CLASS-156-330		N81-14220* #	c 33	NASA-CASE-NPO-14163-1
			US-PATENT-CLASS-204-159.14				US-PATENT-CLASS-428-113				US-PATENT-APPL-SN-878541
			US-PATENT-CLASS-264-212				US-PATENT-CLASS-428-114				US-PATENT-CLASS-363-56
			US-PATENT-CLASS-264-22				US-PATENT-CLASS-428-140				US-PATENT-CLASS-363-71

N81-14221* # c 33	US-PATENT-CLASS-363-78	US-PATENT-CLASS-149-108.4	US-PATENT-APPL-SN-070771
	US-PATENT-4,222,096	US-PATENT-CLASS-23-293R	US-PATENT-CLASS-260-326N
	NASA-CASE-GSC-12411-1	US-PATENT-CLASS-252-364	US-PATENT-CLASS-260-326S
	US-PATENT-APPL-SN-965367	US-PATENT-CLASS-260-96D	US-PATENT-CLASS-260-37EP
	US-PATENT-CLASS-340-309.4	US-PATENT-CLASS-423-1	US-PATENT-CLASS-528-118
N81-14287* # c 35	US-PATENT-CLASS-340-310A	US-PATENT-CLASS-423-131	US-PATENT-CLASS-528-322
	US-PATENT-CLASS-340-310R	US-PATENT-CLASS-423-858.5	US-PATENT-CLASS-538-117
	US-PATENT-CLASS-340-870.24	US-PATENT-CLASS-525-384	US-PATENT-4,244,857
	US-PATENT-CLASS-368-47	US-PATENT-CLASS-526-914	NASA-CASE-NPO-14315-1
	US-PATENT-CLASS-370-85	US-PATENT-CLASS-75-25	US-PATENT-APPL-SN-900659
N81-14317* # c 37	US-PATENT-4,228,422	US-PATENT-4,229,182	US-PATENT-CLASS-201-10
	NASA-CASE-NPO-14513-1	NASA-CASE-NPO-13758-2	US-PATENT-CLASS-201-25
	US-PATENT-APPL-SN-025162	US-PATENT-APPL-SN-823389	US-PATENT-CLASS-201-8
	US-PATENT-CLASS-165-105	US-PATENT-APPL-SN-727444	US-PATENT-CLASS-44-50
	US-PATENT-CLASS-62-514R	US-PATENT-CLASS-110-218	US-PATENT-CLASS-44-62
N81-14318* # c 37	US-PATENT-4,218,892	US-PATENT-CLASS-110-229	US-PATENT-4,246,001
	NASA-CASE-MSC-16973-1	US-PATENT-CLASS-110-232	NASA-CASE-ARC-11253-1
	US-PATENT-APPL-SN-969756	US-PATENT-CLASS-110-343	US-PATENT-APPL-SN-028301
	US-PATENT-CLASS-150-11	US-PATENT-CLASS-110-347	US-PATENT-CLASS-528-310
	US-PATENT-CLASS-156-294	US-PATENT-CLASS-202-118	US-PATENT-CLASS-528-362
N81-14319* # c 37	US-PATENT-CLASS-52-232	US-PATENT-CLASS-264-23	US-PATENT-CLASS-528-401
	US-PATENT-CLASS-52-743	US-PATENT-CLASS-425-378R	US-PATENT-CLASS-528-422
	US-PATENT-4,235,060	US-PATENT-4,206,713	US-PATENT-4,245,085
	NASA-CASE-NPO-14220-1	NASA-CASE-MSC-18035-1	NASA-CASE-MFS-23845-1
	US-PATENT-APPL-SN-907421	US-PATENT-APPL-SN-041142	US-PATENT-APPL-SN-938298
N81-14320* # c 37	US-PATENT-CLASS-60-518	US-PATENT-CLASS-375-1	US-PATENT-CLASS-307-233R
	US-PATENT-CLASS-74-417	US-PATENT-CLASS-375-115	US-PATENT-CLASS-307-306
	US-PATENT-4,228,656	US-PATENT-CLASS-375-58	US-PATENT-CLASS-333-204
	NASA-CASE-LAR-11855-1	US-PATENT-4,221,005	US-PATENT-4,227,096
	US-PATENT-APPL-SN-953314	NASA-CASE-NPO-14444-1	NASA-CASE-MSC-16747-1
N81-14329* # c 44	US-PATENT-CLASS-407-117	US-PATENT-APPL-SN-017890	US-PATENT-APPL-SN-974475
	US-PATENT-CLASS-407-85	US-PATENT-CLASS-332-22	US-PATENT-CLASS-328-134
	US-PATENT-CLASS-408-1R	US-PATENT-CLASS-332-23R	US-PATENT-CLASS-328-37
	US-PATENT-CLASS-62-1.2	US-PATENT-CLASS-375-54	US-PATENT-CLASS-328-55
	US-PATENT-CLASS-82-1C	US-PATENT-CLASS-375-67	US-PATENT-CLASS-331-48
N81-14389* # c 51	US-PATENT-CLASS-82-36R	US-PATENT-CLASS-455-102	US-PATENT-4,241,308
	US-PATENT-4,218,941	US-PATENT-4,218,542	NASA-CASE-NPO-14388-1
	NASA-CASE-GSC-12429-1	NASA-CASE-NPO-14998-1	US-PATENT-APPL-SN-008208
	US-PATENT-APPL-SN-009888	US-PATENT-APPL-SN-195547	US-PATENT-CLASS-60-518
	US-PATENT-CLASS-244-161	NASA-CASE-MSC-18134-1	US-PATENT-CLASS-74-417
N81-14605* # c 51	US-PATENT-CLASS-294-106	US-PATENT-APPL-SN-974472	US-PATENT-4,240,256
	US-PATENT-CLASS-414-1	US-PATENT-CLASS-277-181	NASA-CASE-ARC-11251-1
	US-PATENT-4,219,171	US-PATENT-CLASS-277-229	US-PATENT-APPL-SN-057465
	NASA-CASE-NPO-14416-1	US-PATENT-4,219,203	US-PATENT-CLASS-128-DIG.20
	US-PATENT-APPL-SN-014664	NASA-CASE-NPO-14170-1	US-PATENT-CLASS-137-549
N81-14612* # c 52	US-PATENT-CLASS-29-DIG.1	US-PATENT-APPL-SN-980404	US-PATENT-CLASS-137-886
	US-PATENT-CLASS-29-832	US-PATENT-CLASS-188-134	US-PATENT-CLASS-137-887
	US-PATENT-4,219,926	US-PATENT-CLASS-188-180	US-PATENT-CLASS-251-216
	NASA-CASE-ARC-11114-1	US-PATENT-CLASS-188-184	US-PATENT-CLASS-251-339
	US-PATENT-APPL-SN-951422	US-PATENT-CLASS-244-173	US-PATENT-4,239,057
N81-14613* # c 52	US-PATENT-CLASS-128-DIG.12	US-PATENT-4,219,107	NASA-CASE-FRC-11013-1
	US-PATENT-CLASS-128-DIG.16	NASA-CASE-NPO-14162-1	US-PATENT-APPL-SN-043912
	US-PATENT-CLASS-128-DIG.26	NASA-CASE-NPO-14167-1	US-PATENT-CLASS-244-160
	US-PATENT-CLASS-128-DIG.8	NASA-CASE-NPO-14169-1	US-PATENT-CLASS-244-49
	US-PATENT-CLASS-128-DIG.9	US-PATENT-APPL-SN-893903	US-PATENT-4,240,601
N81-14616* # c 52	US-PATENT-CLASS-128-204.18	US-PATENT-CLASS-307-219	NASA-CASE-NPO-14618-1
	US-PATENT-CLASS-128-207.14	US-PATENT-CLASS-307-225R	US-PATENT-APPL-SN-027559
	US-PATENT-CLASS-128-207.28	US-PATENT-CLASS-307-269	US-PATENT-CLASS-126-419
	US-PATENT-CLASS-128-236	US-PATENT-CLASS-307-291	US-PATENT-CLASS-60-524
	US-PATENT-4,212,297	US-PATENT-CLASS-328-192	US-PATENT-CLASS-60-641
N81-14629* # c 02	US-PATENT-CLASS-128-204.18	US-PATENT-CLASS-328-48	US-PATENT-4,236,383
	US-PATENT-CLASS-128-207.14	US-PATENT-CLASS-328-71	NASA-CASE-NPO-14218-1
	US-PATENT-CLASS-128-236	US-PATENT-4,213,084	US-PATENT-APPL-SN-888432
	US-PATENT-4,212,297	NASA-CASE-MFS-25050-1	US-PATENT-CLASS-350-301
	NASA-CASE-ARC-11117-1	US-PATENT-APPL-SN-057466	US-PATENT-CLASS-354-118
N81-14688* # c 02	US-PATENT-APPL-SN-003693	US-PATENT-CLASS-308-100	US-PATENT-CLASS-362-11
	US-PATENT-CLASS-128-642	US-PATENT-CLASS-73-505	US-PATENT-CLASS-362-241
	US-PATENT-4,219,027	US-PATENT-4,218,921	US-PATENT-4,213,684
	NASA-CASE-ARC-11118-2	NASA-CASE-LEW-23169-2	NASA-CASE-NPO-14657-1
	US-PATENT-APPL-SN-850504	US-PATENT-APPL-SN-191746	US-PATENT-APPL-SN-008211
N81-14988* # c 02	US-PATENT-APPL-SN-974476	NASA-CASE-FRC-11029-1	US-PATENT-CLASS-356-432
	US-PATENT-CLASS-424-274	US-PATENT-APPL-SN-164617	US-PATENT-CLASS-73-15R
	US-PATENT-4,230,717	US-PATENT-CLASS-73-147	US-PATENT-4,243,327
	NASA-CASE-LAR-12326-1	US-PATENT-CLASS-73-178R	NASA-CASE-NPO-14502-1
	US-PATENT-APPL-SN-019541	US-PATENT-4,240,290	US-PATENT-APPL-SN-965368
N81-14999* # c 07	US-PATENT-CLASS-102-58R	NASA-CASE-LEW-12493-1	US-PATENT-CLASS-356-345
	US-PATENT-CLASS-102-92.1	US-PATENT-APPL-SN-893857	US-PATENT-CLASS-356-352
	US-PATENT-CLASS-244-119	US-PATENT-CLASS-156-292	US-PATENT-CLASS-356-358
	US-PATENT-CLASS-244-130	US-PATENT-CLASS-228-118	US-PATENT-4,243,323
	US-PATENT-4,225,102	US-PATENT-CLASS-228-170	NASA-CASE-LAR-12750-1
N81-15104* # c 27	US-PATENT-4,225,102	US-PATENT-CLASS-228-174	US-PATENT-APPL-SN-210491
	NASA-CASE-LEW-13201-1	US-PATENT-CLASS-228-190	NASA-CASE-LAR-11797-1
	US-PATENT-APPL-SN-038980	US-PATENT-4,211,354	US-PATENT-APPL-SN-969755
	US-PATENT-CLASS-137-15.1	NASA-CASE-NPO-13530-1	US-PATENT-CLASS-244-17.25
	US-PATENT-CLASS-181-214	US-PATENT-CLASS-210-500M	US-PATENT-CLASS-416-114
N81-15119* # c 28	US-PATENT-4,220,171	US-PATENT-CLASS-260-2.1	US-PATENT-CLASS-416-500
	NASA-CASE-NPO-10830-1	US-PATENT-CLASS-260-2.2R	US-PATENT-CLASS-74-519
	US-PATENT-APPL-SN-825489	US-PATENT-4,014,798	US-PATENT-4,245,956
	US-PATENT-CLASS-117-6	NASA-CASE-ARC-11248-1	NASA-CASE-LEW-12907-2
	US-PATENT-CLASS-138.8R	US-PATENT-APPL-SN-028300	US-PATENT-APPL-SN-752050
N81-17170* # c 06	US-PATENT-CLASS-260-33.8UB	US-PATENT-CLASS-528-362	US-PATENT-APPL-SN-909325
	US-PATENT-CLASS-33.8UB	US-PATENT-CLASS-528-401	US-PATENT-CLASS-364-106
	US-PATENT-CLASS-37N	US-PATENT-CLASS-528-422	US-PATENT-CLASS-364-431
	US-PATENT-CLASS-41R	US-PATENT-CLASS-528-423	US-PATENT-CLASS-60-39.24
	US-PATENT-CLASS-77.5AQ	US-PATENT-4,242,498	US-PATENT-4,249,238
N81-17171* # c 24	US-PATENT-CLASS-77.5CH	NASA-CASE-LEW-13228-1	NASA-CASE-LEW-12594-2
	US-PATENT-CLASS-859R		
	US-PATENT-CLASS-94.9N		
	US-PATENT-3,655,814		
	NASA-CASE-NPO-14110-1		
N81-17178* # c 25	US-PATENT-APPL-SN-947000		
N81-17259* # c 27			
N81-17260* # c 27			

			US-PATENT-APPL-SN-741056				US-PATENT-CLASS-340-146.3S				US-PATENT-APPL-SN-856462
			US-PATENT-APPL-SN-909608				US-PATENT-CLASS-340-146.3Y				US-PATENT-CLASS-239-127.1
			US-PATENT-CLASS-60-226R				US-PATENT-3,845,466				US-PATENT-CLASS-60-204
			US-PATENT-CLASS-60-236				NASA-CASE-NPO-12087-1				US-PATENT-CLASS-60-267
			US-PATENT-CLASS-60-238				US-PATENT-APPL-SN-095217				US-PATENT-4,199,937
			US-PATENT-CLASS-60-239				US-PATENT-CLASS-250-83.6R				US-PATENT-4,245,469
			US-PATENT-4,242,864				US-PATENT-3,704,284				NASA-CASE-MFS-23999-1
N81-19130* #	c 08		NASA-CASE-LAR-11970-2				NASA-CASE-NPO-13970-1				US-PATENT-APPL-SN-060435
			US-PATENT-APPL-SN-034104				US-PATENT-APPL-SN-023484				US-PATENT-CLASS-250-203R
			US-PATENT-APPL-SN-727503				US-PATENT-CLASS-318-138				US-PATENT-CLASS-250-209
			US-PATENT-CLASS-244-12.5				US-PATENT-CLASS-318-254				US-PATENT-4,262,195
			US-PATENT-CLASS-244-52				US-PATENT-CLASS-318-439				NASA-CASE-LEW-12918-3
			US-PATENT-CLASS-244-87				US-PATENT-4,249,116				US-PATENT-APPL-SN-134855
			US-PATENT-4,236,684				NASA-CASE-NPO-14329-1				US-PATENT-CLASS-429-120
N81-19242* #	c 25		NASA-CASE-MFS-25000-1				US-PATENT-APPL-SN-044432				US-PATENT-CLASS-429-160
			US-PATENT-APPL-SN-974474				US-PATENT-CLASS-128-642				US-PATENT-CLASS-429-164
			US-PATENT-CLASS-260-29.6RB				US-PATENT-CLASS-128-774				US-PATENT-CLASS-429-94
			US-PATENT-CLASS-526-201				US-PATENT-CLASS-73-141A				US-PATENT-4,262,064
			US-PATENT-CLASS-526-88				US-PATENT-4,249,417				NASA-CASE-MSC-16433-1
			US-PATENT-4,247,434				NASA-CASE-ARC-11257-1				US-PATENT-APPL-SN-910992
N81-19244* #	c 25		NASA-CASE-NPO-13309-1				US-PATENT-APPL-SN-078611				US-PATENT-CLASS-128-295
			US-PATENT-APPL-SN-363130				US-PATENT-CLASS-73-178R				US-PATENT-CLASS-128-761
			US-PATENT-CLASS-210-24				US-PATENT-CLASS-73-490				US-PATENT-CLASS-4-144.3
			US-PATENT-CLASS-260-2.1E				US-PATENT-CLASS-73-504				US-PATENT-4,246,901
			US-PATENT-CLASS-260-2.2R				US-PATENT-4,244,215				NASA-CASE-KSC-11085-1
			US-PATENT-CLASS-264-41				NASA-CASE-MFS-24368-3				US-PATENT-APPL-SN-046739
			US-PATENT-3,944,485				US-PATENT-APPL-SN-243683				US-PATENT-CLASS-261-79A
N81-19296* #	c 27		NASA-CASE-LEW-12933-1				NASA-CASE-GSC-12609-1				US-PATENT-CLASS-422-109
			US-PATENT-APPL-SN-027557				US-PATENT-APPL-SN-218586				US-PATENT-CLASS-422-27
			US-PATENT-CLASS-260-33.4R				NASA-CASE-LEW-12445-1				US-PATENT-CLASS-422-3
			US-PATENT-CLASS-427-221				US-PATENT-APPL-SN-238887				US-PATENT-CLASS-422-30
			US-PATENT-CLASS-427-379				NASA-CASE-LAR-12268-1				US-PATENT-CLASS-422-34
			US-PATENT-CLASS-528-353				US-PATENT-APPL-SN-015996				US-PATENT-4,250,143
			US-PATENT-4,244,853				US-PATENT-CLASS-244-181				NASA-CASE-KSC-11048-1
N81-19343* #	c 31		NASA-CASE-GSC-12513-1				US-PATENT-CLASS-244-195				US-PATENT-APPL-SN-023437
			US-PATENT-APPL-SN-053571				US-PATENT-CLASS-318-584				US-PATENT-CLASS-364-200
			US-PATENT-CLASS-109-49.5				US-PATENT-CLASS-364-434				US-PATENT-4,254,464
			US-PATENT-CLASS-109-58.5				US-PATENT-4,261,537				NASA-CASE-GSC-12528-1
			US-PATENT-CLASS-220-82R				NASA-CASE-ARC-11253-3				US-PATENT-APPL-SN-111439
			US-PATENT-CLASS-220-89A				US-PATENT-APPL-SN-028301				US-PATENT-CLASS-250-368
			US-PATENT-CLASS-49-171				US-PATENT-APPL-SN-145283				US-PATENT-CLASS-250-483
			US-PATENT-4,245,586				US-PATENT-CLASS-260-465.5R				US-PATENT-4,262,206
N81-19389* #	c 33		NASA-CASE-NPO-14297-1				US-PATENT-CLASS-528-310				NASA-CASE-MSC-18674-1
			US-PATENT-APPL-SN-938299				US-PATENT-CLASS-564-229				US-PATENT-APPL-SN-235363
			US-PATENT-CLASS-156-DIG.96				US-PATENT-4,269,787				NASA-CASE-NPO-15102-1
			US-PATENT-CLASS-156-608				NASA-CASE-LEW-13135-2				US-PATENT-APPL-SN-15472-2
			US-PATENT-CLASS-219-10.49R				US-PATENT-APPL-SN-113014				US-PATENT-CLASS-250-350
			US-PATENT-CLASS-219-10.67				US-PATENT-APPL-SN-971475				US-PATENT-CLASS-356-432
			US-PATENT-CLASS-422-246				US-PATENT-CLASS-264-104				US-PATENT-4,253,769
			US-PATENT-CLASS-422-249				US-PATENT-CLASS-264-105				NASA-CASE-LEW-13088-1
			US-PATENT-CLASS-432-264				US-PATENT-CLASS-429-139				US-PATENT-APPL-SN-089779
			US-PATENT-4,242,553				US-PATENT-CLASS-429-249				US-PATENT-CLASS-428-471
N81-19392* #	c 33		NASA-CASE-GSC-12360-1				US-PATENT-CLASS-429-253				US-PATENT-CLASS-428-632
			US-PATENT-APPL-SN-041164				US-PATENT-CLASS-429-27				US-PATENT-CLASS-428-678
			US-PATENT-CLASS-363-101				US-PATENT-CLASS-429-28				US-PATENT-CLASS-428-679
			US-PATENT-CLASS-363-21				US-PATENT-CLASS-525-61				US-PATENT-CLASS-428-680
			US-PATENT-4,245,286				US-PATENT-4,262,087				US-PATENT-4,255,495
N81-19393* #	c 33		NASA-CASE-NPO-14505-1				NASA-CASE-NPO-10424-1				NASA-CASE-MSC-18107-1
			US-PATENT-APPL-SN-956166				US-PATENT-APPL-SN-692636				US-PATENT-APPL-SN-956168
			US-PATENT-CLASS-363-21				US-PATENT-CLASS-260-37				US-PATENT-CLASS-430-271
			US-PATENT-CLASS-363-36				US-PATENT-3,651,008				US-PATENT-CLASS-430-325
			US-PATENT-CLASS-363-40				NASA-CASE-MSC-16394-1				US-PATENT-CLASS-430-329
			US-PATENT-CLASS-363-47				US-PATENT-APPL-SN-161255				US-PATENT-CLASS-430-330
			US-PATENT-4,245,288				US-PATENT-CLASS-204-129				US-PATENT-4,262,080
N81-19426* #	c 35		NASA-CASE-MFS-23923-1				US-PATENT-CLASS-204-252				NASA-CASE-LAR-12095-1
			US-PATENT-APPL-SN-053569				US-PATENT-CLASS-204-266				US-PATENT-APPL-SN-811401
			US-PATENT-CLASS-73-190R				US-PATENT-CLASS-204-290F				US-PATENT-CLASS-244-158R
			US-PATENT-4,248,083				US-PATENT-CLASS-204-290R				US-PATENT-CLASS-403-171
N81-19427* #	c 35		NASA-CASE-MSC-16370-1				US-PATENT-CLASS-204-291				US-PATENT-CLASS-428-902
			US-PATENT-APPL-SN-061556				US-PATENT-4,263,112				US-PATENT-CLASS-52-309.1
			US-PATENT-CLASS-329-107				NASA-CASE-NPO-14617-1				US-PATENT-CLASS-52-648
			US-PATENT-CLASS-329-50				US-PATENT-APPL-SN-051269				US-PATENT-CLASS-52-726
			US-PATENT-CLASS-375-1				US-PATENT-CLASS-330-8				US-PATENT-4,258,821
			US-PATENT-CLASS-375-104				US-PATENT-4,262,259				NASA-CASE-LAR-12077-1
			US-PATENT-CLASS-375-34				NASA-CASE-LAR-12177-1				US-PATENT-APPL-SN-014663
			US-PATENT-CLASS-375-99				US-PATENT-APPL-SN-027558				US-PATENT-CLASS-52-645
			US-PATENT-4,241,312				US-PATENT-CLASS-356-28.5				US-PATENT-4,259,825
N81-19455* #	c 37		NASA-CASE-LEW-12982-1				US-PATENT-CLASS-356-356				NASA-CASE-NPO-14588-1
			US-PATENT-APPL-SN-929084				US-PATENT-CLASS-356-358				US-PATENT-APPL-SN-008209
			US-PATENT-CLASS-204-192E				US-PATENT-4,255,048				US-PATENT-CLASS-343-755
			US-PATENT-CLASS-228-116				NASA-CASE-LEW-12991-1				US-PATENT-CLASS-343-772
			US-PATENT-CLASS-228-205				US-PATENT-APPL-SN-961832				US-PATENT-CLASS-343-781R
			US-PATENT-4,245,768				US-PATENT-CLASS-270-166				US-PATENT-CLASS-343-786
N81-19558* #	c 44		NASA-CASE-NPO-14670-1				US-PATENT-4,260,996				US-PATENT-4,258,366
			US-PATENT-APPL-SN-043941				NASA-CASE-LAR-11695-2				NASA-CASE-GSC-12399-1
			US-PATENT-CLASS-136-258				US-PATENT-APPL-SN-103836				US-PATENT-APPL-SN-961831
			US-PATENT-CLASS-252-62.3E				US-PATENT-APPL-SN-893865				US-PATENT-CLASS-70-58
			US-PATENT-CLASS-357-30				US-PATENT-CLASS-152-330RF				US-PATENT-4,252,007
			US-PATENT-CLASS-357-59				US-PATENT-CLASS-152-353G				NASA-CASE-NPO-14221-1
			US-PATENT-CLASS-357-63				US-PATENT-CLASS-152-353R				US-PATENT-APPL-SN-907431
			US-PATENT-4,249,957				US-PATENT-CLASS-152-379.4				US-PATENT-CLASS-60-517
N81-19896* #	c 74		NASA-CASE-NPO-11337-1				US-PATENT-CLASS-244-103R				US-PATENT-CLASS-60-525
			NASA-CASE-NPO-11575-1				US-PATENT-CLASS-244-130				US-PATENT-4,255,929
			US-PATENT-APPL-SN-090584				US-PATENT-4,267,992				NASA-CASE-NPO-13823-1
			US-PATENT-APPL-SN-276599				NASA-CASE-LEW-12441-3				US-PATENT-APPL-SN-658487
			US-PATENT-CLASS-340-146.3H				US-PATENT-APPL-SN-032307				US-PATENT-CLASS-106-43

		US-PATENT-CLASS-264-332	N81-26447* #	c 37	NASA-CASE-LEW-12119-2		US-PATENT-4,170,987	
		US-PATENT-4,252,768			US-PATENT-APPL-SN-102004	N81-27806* #	c 54	NASA-CASE-LAR-12320-1
N81-25400* #	c 39	NASA-CASE-NPO-14363-1			US-PATENT-APPL-SN-672219			US-PATENT-APPL-SN-043913
		US-PATENT-APPL-SN-969760			US-PATENT-CLASS-277-153			US-PATENT-CLASS-434-59
		US-PATENT-CLASS-356-213			US-PATENT-CLASS-277-193			US-PATENT-4,264,310
		US-PATENT-CLASS-356-216			US-PATENT-4,212,477	N81-27814* #	c 60	NASA-CASE-NPO-14554-1
		US-PATENT-CLASS-356-234			US-PATENT-4,266,788			US-PATENT-APPL-SN-974473
		US-PATENT-CLASS-356-32	N81-26509* #	c 43	NASA-CASE-NPO-14140-1			US-PATENT-CLASS-364-200
		US-PATENT-4,252,440			NASA-CASE-NPO-14382-1			US-PATENT-CLASS-364-900
N81-25660* #	c 52	NASA-CASE-MFS-23717-1			US-PATENT-APPL-SN-897832			US-PATENT-CLASS-370-58
		US-PATENT-APPL-SN-950877			US-PATENT-CLASS-134-17			US-PATENT-4,264,984
		US-PATENT-CLASS-128-DIG.25			US-PATENT-CLASS-166-222	N81-28698* #	c 51	NASA-CASE-LAR-12520-1
		US-PATENT-CLASS-128-1R			US-PATENT-CLASS-166-77			US-PATENT-APPL-SN-067596
		US-PATENT-CLASS-128-346			US-PATENT-CLASS-239-582			US-PATENT-CLASS-204-1T
		US-PATENT-CLASS-137-493			US-PATENT-CLASS-239-591			US-PATENT-CLASS-204-195B
		US-PATENT-4,258,093			US-PATENT-CLASS-299-13			US-PATENT-CLASS-435-291
N81-25661* #	c 52	NASA-CASE-GSC-12082-2			US-PATENT-CLASS-299-17			US-PATENT-CLASS-435-34
		US-PATENT-APPL-SN-678958			US-PATENT-CLASS-299-20			US-PATENT-CLASS-435-5
		US-PATENT-APPL-SN-798976			US-PATENT-4,226,475	N81-28740* #	c 52	US-PATENT-4,264,728
		US-PATENT-CLASS-128-80F	N81-26718* #	c 54	NASA-CASE-MFS-23696-1			NASA-CASE-MSC-18381-1
		US-PATENT-4,252,111			US-PATENT-APPL-SN-945044			US-PATENT-APPL-SN-034531
N81-25662* #	c 52	NASA-CASE-ARC-11167-1			US-PATENT-CLASS-294-93			US-PATENT-CLASS-128-295
		US-PATENT-APPL-SN-057526			US-PATENT-CLASS-414-735			US-PATENT-CLASS-414.3
		US-PATENT-CLASS-128-89R			US-PATENT-CLASS-414-744A	N81-29129* #	c 07	US-PATENT-4,270,539
		US-PATENT-4,261,349			US-PATENT-4,273,505			NASA-CASE-LEW-12990-1
N81-26073* #	c 02	NASA-CASE-KSC-11042-2			NASA-CASE-LAR-12544-1			US-PATENT-APPL-SN-916654
		US-PATENT-APPL-SN-154663	N81-27006* #	c 07	US-PATENT-APPL-SN-243885			US-PATENT-CLASS-261-28
N81-26114* #	c 05	NASA-CASE-LAR-12406-1			NASA-CASE-ARC-11178-2			US-PATENT-CLASS-431-2
		US-PATENT-APPL-SN-008210	N81-27271* #	c 27	US-PATENT-APPL-SN-129798			US-PATENT-CLASS-60-39.06
		US-PATENT-CLASS-165-104.14			US-PATENT-CLASS-528-168			US-PATENT-CLASS-60-726
		US-PATENT-CLASS-244-117A			US-PATENT-CLASS-528-399			US-PATENT-CLASS-60-737
		US-PATENT-CLASS-244-163			US-PATENT-CLASS-528-4	N81-29152* #	c 18	US-PATENT-4,189,914
		US-PATENT-CLASS-60-259			US-PATENT-CLASS-528-6			NASA-CASE-LAR-12052-1
		US-PATENT-CLASS-60-267			US-PATENT-4,276,403			US-PATENT-APPL-SN-102002
		US-PATENT-CLASS-60-730	N81-27272* #	c 27	NASA-CASE-ARC-11321-1			US-PATENT-CLASS-364-453
		US-PATENT-CLASS-82-DIG.5			US-PATENT-APPL-SN-175452			US-PATENT-CLASS-364-566
		US-PATENT-4,273,304			US-PATENT-CLASS-428-280			US-PATENT-CLASS-73-178R
N81-26152* #	c 08	NASA-CASE-LAR-12562-1			US-PATENT-CLASS-428-367			US-PATENT-CLASS-73-510
		US-PATENT-APPL-SN-015995			US-PATENT-CLASS-428-408	N81-29160* #	c 23	US-PATENT-4,281,384
		US-PATENT-CLASS-244-181			US-PATENT-CLASS-428-902			NASA-CASE-LEW-13101-2
		US-PATENT-CLASS-244-182			US-PATENT-CLASS-428-920			US-PATENT-APPL-SN-145271
		US-PATENT-4,266,743			US-PATENT-CLASS-526-262			US-PATENT-APPL-SN-971473
N81-26161* #	c 14	NASA-CASE-LAR-12250-1			US-PATENT-CLASS-528-228			US-PATENT-CLASS-260-17.4UC
		US-PATENT-APPL-SN-910794			US-PATENT-4,276,344			US-PATENT-CLASS-264-104
		US-PATENT-CLASS-244-160	N81-27323* #	c 31	NASA-CASE-MSC-16217-1			US-PATENT-CLASS-428-139
		US-PATENT-CLASS-244-2			US-PATENT-APPL-SN-893383			US-PATENT-CLASS-428-249
		US-PATENT-CLASS-244-63			US-PATENT-CLASS-52-108			US-PATENT-CLASS-429-253
		US-PATENT-4,265,416			US-PATENT-CLASS-52-745			US-PATENT-CLASS-429-27
N81-26179* #	c 24	NASA-CASE-LEW-12493-2			US-PATENT-CLASS-52-745			US-PATENT-CLASS-429-28
		US-PATENT-APPL-SN-122967			US-PATENT-4,237,662			US-PATENT-CLASS-525-56
		US-PATENT-APPL-SN-893857			NASA-CASE-LAR-12195-1	N81-29163* #	c 24	US-PATENT-CLASS-525-61
		US-PATENT-CLASS-228-118			US-PATENT-APPL-SN-946991			US-PATENT-4,272,470
		US-PATENT-CLASS-228-190			US-PATENT-CLASS-182-62.5			NASA-CASE-MFS-23674-1
		US-PATENT-4,211,354			US-PATENT-CLASS-212-267			US-PATENT-APPL-SN-912276
		US-PATENT-4,267,953			US-PATENT-CLASS-52-111			US-PATENT-CLASS-156-161
N81-26358* #	c 33	NASA-CASE-LAR-12196-1			US-PATENT-CLASS-52-632			US-PATENT-CLASS-156-165
		US-PATENT-APPL-SN-017887			US-PATENT-4,238,911			US-PATENT-CLASS-156-285
		US-PATENT-CLASS-343-100PE	N81-27341* #	c 32	NASA-CASE-GSC-12147-1			US-PATENT-CLASS-156-284
		US-PATENT-4,264,908			US-PATENT-APPL-SN-780873			US-PATENT-CLASS-156-74
N81-26359* #	c 33	NASA-CASE-KSC-11065-1			US-PATENT-CLASS-343-112R			US-PATENT-CLASS-264-229
		US-PATENT-APPL-SN-051271			US-PATENT-4,276,553			US-PATENT-CLASS-264-231
		US-PATENT-CLASS-324-51	N81-27395* #	c 33	NASA-CASE-MFS-23988-1			US-PATENT-CLASS-264-258
		US-PATENT-CLASS-324-73AT			US-PATENT-APPL-SN-044431			US-PATENT-CLASS-264-259
		US-PATENT-CLASS-371-20			US-PATENT-CLASS-307-252UA			US-PATENT-CLASS-264-311
		US-PATENT-CLASS-371-25			US-PATENT-CLASS-318-799			US-PATENT-CLASS-74-572
		US-PATENT-4,267,594			US-PATENT-CLASS-318-810			US-PATENT-4,190,626
N81-26360* #	c 33	NASA-CASE-GSC-12515-1			US-PATENT-4,266,177	N81-29229* #	c 27	NASA-CASE-LAR-12642-1
		US-PATENT-APPL-SN-172727			NASA-CASE-NPO-14426-1			US-PATENT-APPL-SN-092141
		US-PATENT-CLASS-148-1.5	N81-27396* #	c 33	US-PATENT-APPL-SN-009889			US-PATENT-CLASS-264-137
		US-PATENT-CLASS-148-187			US-PATENT-CLASS-307-352			US-PATENT-CLASS-428-473.5
		US-PATENT-CLASS-156-647			US-PATENT-CLASS-307-353			US-PATENT-CLASS-528-222
		US-PATENT-CLASS-156-648			US-PATENT-CLASS-328-151			US-PATENT-CLASS-528-229
		US-PATENT-CLASS-156-649			US-PATENT-4,282,258			US-PATENT-4,281,102
		US-PATENT-CLASS-29-571			NASA-CASE-MSC-12745-1	N81-29308* #	c 32	NASA-CASE-NPO-14641-1
		US-PATENT-CLASS-29-578			US-PATENT-APPL-SN-746579			US-PATENT-APPL-SN-076643
		US-PATENT-CLASS-29-580			US-PATENT-CLASS-179-78			US-PATENT-CLASS-343-100CL
		US-PATENT-CLASS-357-23			US-PATENT-CLASS-333-12			US-PATENT-CLASS-455-278
		US-PATENT-CLASS-357-55			US-PATENT-CLASS-361-56			US-PATENT-4,278,978
		US-PATENT-CLASS-357-60			US-PATENT-CLASS-361-91	N81-29342* #	c 33	NASA-CASE-GSC-12111-2
		US-PATENT-CLASS-357-91			US-PATENT-4,264,940			US-PATENT-APPL-SN-678813
		US-PATENT-4,272,302	N81-27519* #	c 37	NASA-CASE-NPO-14521-1			US-PATENT-APPL-SN-830272
N81-26402* #	c 34	NASA-CASE-KSC-11076-1			US-PATENT-APPL-SN-023439			US-PATENT-CLASS-350-86.25
		US-PATENT-APPL-SN-051274			US-PATENT-CLASS-244-161			US-PATENT-CLASS-365-120
		US-PATENT-CLASS-364-510			US-PATENT-CLASS-294-86R			US-PATENT-4,154,501
		US-PATENT-CLASS-364-571			US-PATENT-CLASS-318-640	N81-29407* #	c 35	NASA-CASE-LAR-12308-1
		US-PATENT-CLASS-73-861			US-PATENT-CLASS-356-152			US-PATENT-APPL-SN-111438
		US-PATENT-4,253,156			US-PATENT-CLASS-414-730			US-PATENT-CLASS-73-683.31
N81-26431* #	c 35	NASA-CASE-FRC-10112-1			US-PATENT-4,260,187			US-PATENT-CLASS-73-684.52
		US-PATENT-APPL-SN-122965	N81-27615* #	c 44	NASA-CASE-LEW-13556-1			US-PATENT-4,274,285
		US-PATENT-CLASS-219-209			US-PATENT-APPL-SN-272233			NASA-CASE-LEW-13148-2
		US-PATENT-CLASS-219-210	N81-27783* #	c 52	NASA-CASE-NPO-14402-1			US-PATENT-APPL-SN-061555
		US-PATENT-CLASS-219-510			US-PATENT-APPL-SN-855364			US-PATENT-APPL-SN-964754
		US-PATENT-CLASS-236-1F			US-PATENT-CLASS-128-665			US-PATENT-CLASS-204-2.1
		US-PATENT-CLASS-361-334			US-PATENT-CLASS-356-406			US-PATENT-4,192,910
		US-PATENT-CLASS-73-361			US-PATENT-CLASS-356-407			US-PATENT-4,270,984
		US-PATENT-4,264,802			US-PATENT-CLASS-356-416	N81-29525* #	c 44	NASA-CASE-NPO-13689-2



		US-PATENT-APPL-SN-093714	US-PATENT-APPL-SN-135056	US-PATENT-CLASS-343-5CM
		US-PATENT-APPL-SN-597430	US-PATENT-CLASS-318-663	US-PATENT-4,292,634
		US-PATENT-APPL-SN-683073	US-PATENT-CLASS-74-89	N82-12441* # c 37 ..... NASA-CASE-MFS-25363-1
		US-PATENT-APPL-SN-837513	US-PATENT-CLASS-92-130R	US-PATENT-APPL-SN-171933
		US-PATENT-CLASS-136-255	US-PATENT-4,274,038	US-PATENT-CLASS-118-423
		US-PATENT-CLASS-136-258	N82-11088* # c 09 ..... NASA-CASE-LAR-12532-1	US-PATENT-CLASS-118-500
		US-PATENT-CLASS-136-262	US-PATENT-APPL-SN-135040	US-PATENT-CLASS-134-137
		US-PATENT-CLASS-357-15	US-PATENT-CLASS-73-147	US-PATENT-4,286,542
		US-PATENT-CLASS-357-30	US-PATENT-4,286,460	N82-12442* # c 37 ..... NASA-CASE-LEW-12989-1
		US-PATENT-4,278,830	N82-11144* # c 25 ..... NASA-CASE-NPO-14273-1	US-PATENT-APPL-SN-092145
N81-29763* # c 52		NASA-CASE-ARC-11031-1	US-PATENT-APPL-SN-969759	US-PATENT-CLASS-277-27
		US-PATENT-APPL-SN-897828	US-PATENT-CLASS-110-234	US-PATENT-CLASS-277-40
		US-PATENT-CLASS-128-275	US-PATENT-CLASS-110-245	US-PATENT-CLASS-277-93R
		US-PATENT-CLASS-128-760	US-PATENT-CLASS-110-255	US-PATENT-4,291,887
		US-PATENT-4,190,060	US-PATENT-CLASS-110-266	N82-12685* # c 46 ..... NASA-CASE-NPO-14544-1
N81-29764* # c 52		NASA-CASE-ARC-11118-1	US-PATENT-CLASS-122-4D	US-PATENT-APPL-SN-078612
		US-PATENT-APPL-SN-850504	US-PATENT-4,287,838	US-PATENT-CLASS-343-100ME
		US-PATENT-CLASS-424-247	N82-11206* # c 27 ..... NASA-CASE-LAR-12640-1	US-PATENT-CLASS-343-781P
		US-PATENT-CLASS-424-267	US-PATENT-APPL-SN-092142	US-PATENT-4,282,525
		US-PATENT-CLASS-424-274	US-PATENT-CLASS-156-307.7	N82-13376* # c 34 ..... NASA-CASE-MFS-25139-1
		US-PATENT-4,279,906	US-PATENT-CLASS-156-307.3	US-PATENT-APPL-SN-126138
N81-29963* # c 74		NASA-CASE-NPO-14448-1	US-PATENT-CLASS-156-307.5	US-PATENT-CLASS-239-499
		US-PATENT-APPL-SN-037560	US-PATENT-CLASS-528-126	US-PATENT-CLASS-239-589
		US-PATENT-CLASS-356-345	US-PATENT-CLASS-528-172	US-PATENT-CLASS-239-601
		US-PATENT-CLASS-356-346	US-PATENT-CLASS-528-173	US-PATENT-4,300,723
		US-PATENT-4,278,351	US-PATENT-CLASS-528-180	N82-13415* # c 36 ..... NASA-CASE-LAR-12592-1
N81-32510* # c 37		NASA-CASE-MSC-16239-1	US-PATENT-CLASS-528-207	US-PATENT-APPL-SN-041141
		US-PATENT-APPL-SN-847276	US-PATENT-CLASS-528-208	US-PATENT-CLASS-331-94.5C
		US-PATENT-CLASS-91-325	US-PATENT-CLASS-528-210	US-PATENT-CLASS-331-94.5D
		US-PATENT-CLASS-91-341R	US-PATENT-CLASS-528-211	US-PATENT-CLASS-331-94.5P
		US-PATENT-CLASS-91-410	US-PATENT-CLASS-528-225	US-PATENT-4,300,106
		US-PATENT-4,283,995	US-PATENT-CLASS-528-228	N82-13465* # c 43 ..... NASA-CASE-GSC-12032-2
N81-32829* # c 51		NASA-CASE-MFS-23825-1	US-PATENT-CLASS-528-351	US-PATENT-APPL-SN-578700
		US-PATENT-APPL-SN-145273	US-PATENT-CLASS-528-353	US-PATENT-APPL-SN-583219
		US-PATENT-CLASS-119-17	US-PATENT-4,284,461	US-PATENT-CLASS-250-235
		US-PATENT-CLASS-119-18	N82-11312* # c 31 ..... NASA-CASE-GSC-12697-1	US-PATENT-CLASS-250-236
		US-PATENT-4,284,034	US-PATENT-APPL-SN-308204	US-PATENT-CLASS-358-109
N81-33235* # c 24		NASA-CASE-LAR-12065-2	N82-11336* # c 32 ..... NASA-CASE-MSC-18606-1	US-PATENT-4,300,159
		US-PATENT-APPL-SN-119337	US-PATENT-APPL-SN-145206	N82-15381* # c 35 ..... NASA-CASE-NPO-14839-1
		US-PATENT-APPL-SN-889671	US-PATENT-CLASS-343-700MS	US-PATENT-APPL-SN-106119
		US-PATENT-CLASS-156-242	US-PATENT-CLASS-343-708	US-PATENT-CLASS-343-100PE
		US-PATENT-CLASS-156-245	US-PATENT-CLASS-343-727	US-PATENT-CLASS-455-137
		US-PATENT-CLASS-156-252	US-PATENT-CLASS-343-795	US-PATENT-CLASS-455-139
		US-PATENT-CLASS-156-264	US-PATENT-CLASS-343-846	US-PATENT-CLASS-455-60
		US-PATENT-CLASS-156-285	US-PATENT-4,287,518	US-PATENT-4,295,140
		US-PATENT-CLASS-156-290	N82-11357* # c 33 ..... NASA-CASE-MSC-18106-1	N82-16059* # c 04 ..... NASA-CASE-ARC-10990-1
		US-PATENT-4,229,473	US-PATENT-APPL-SN-098568	US-PATENT-APPL-SN-749420
		US-PATENT-4,274,901	US-PATENT-CLASS-335-256	US-PATENT-CLASS-244-114R
N81-33246* # c 25		NASA-CASE-NPO-14272-1	US-PATENT-CLASS-335-266	US-PATENT-CLASS-340-26
		US-PATENT-APPL-SN-878253	US-PATENT-CLASS-361-141	US-PATENT-4,291,294
		US-PATENT-CLASS-201-17	US-PATENT-4,295,111	N82-16075* # c 06 ..... NASA-CASE-FRC-11005-1
		US-PATENT-CLASS-44-1R	N82-11360* # c 33 ..... NASA-CASE-MFS-25586-1	US-PATENT-APPL-SN-043942
		US-PATENT-CLASS-44-2	US-PATENT-APPL-SN-310714	US-PATENT-CLASS-340-27NA
		US-PATENT-4,146,367	N82-11399* # c 34 ..... NASA-CASE-LEW-12950-1	US-PATENT-CLASS-73-178R
N81-33319* # c 31		NASA-CASE-NPO-14596-1	US-PATENT-APPL-SN-202228	US-PATENT-4,283,705
		US-PATENT-APPL-SN-037072	N82-11431* # c 35 ..... NASA-CASE-LAR-12552-1	N82-16174* # c 23 ..... NASA-CASE-ARC-11244-1
		US-PATENT-CLASS-264-24	US-PATENT-APPL-SN-070366	US-PATENT-APPL-SN-054501
		US-PATENT-CLASS-264-5	US-PATENT-CLASS-235-92PC	US-PATENT-CLASS-260-340.9R
		US-PATENT-CLASS-264-9	US-PATENT-CLASS-324-71CP	US-PATENT-CLASS-568-445
		US-PATENT-CLASS-425-6	US-PATENT-4,286,209	US-PATENT-CLASS-568-497
		US-PATENT-CLASS-65-142	N82-11432* # c 35 ..... NASA-CASE-MFS-23250-1	US-PATENT-4,277,402
		US-PATENT-CLASS-65-21.4	US-PATENT-APPL-SN-119340	N82-16238* # c 27 ..... NASA-CASE-MSC-18382-1
		US-PATENT-CLASS-65-22	US-PATENT-CLASS-422-40	US-PATENT-APPL-SN-145107
		US-PATENT-4,278,632	US-PATENT-CLASS-430-17	US-PATENT-CLASS-106-18.16
N81-33403* # c 33		NASA-CASE-GSC-12324-1	US-PATENT-CLASS-430-372	US-PATENT-CLASS-106-18.24
		US-PATENT-APPL-SN-945043	US-PATENT-4,287,152	US-PATENT-CLASS-260-45.7R
		US-PATENT-CLASS-358-109	N82-11469* # c 37 ..... NASA-CASE-NPO-15539-1	US-PATENT-CLASS-427-393.3
		US-PATENT-CLASS-358-213	US-PATENT-APPL-SN-303670	US-PATENT-CLASS-428-263
		US-PATENT-4,280,141	N82-11634* # c 45 ..... NASA-CASE-NPO-13877-1	US-PATENT-CLASS-428-264
N81-33404* # c 33		NASA-CASE-NPO-14316-1	US-PATENT-APPL-SN-652979	US-PATENT-CLASS-428-265
		US-PATENT-APPL-SN-051276	US-PATENT-CLASS-210-40	US-PATENT-CLASS-428-267
		US-PATENT-CLASS-363-24	US-PATENT-CLASS-252-422	US-PATENT-CLASS-428-272
		US-PATENT-CLASS-363-56	US-PATENT-4,209,393	US-PATENT-4,284,682
		US-PATENT-4,276,588	N82-11770* # c 52 ..... NASA-CASE-MSC-14836-1	N82-16340* # c 33 ..... NASA-CASE-GSC-12420-1
N81-33405* # c 33		NASA-CASE-NPO-14435-1	US-PATENT-APPL-SN-691647	US-PATENT-APPL-SN-129793
		US-PATENT-APPL-SN-017886	US-PATENT-CLASS-128-327	US-PATENT-CLASS-333-104
		US-PATENT-CLASS-329-122	US-PATENT-CLASS-128-686	US-PATENT-CLASS-333-246
		US-PATENT-CLASS-331-DIG.2	US-PATENT-CLASS-128-691	US-PATENT-4,302,734
		US-PATENT-CLASS-364-514	US-PATENT-4,294,261	N82-16396* # c 36 ..... NASA-CASE-GSC-12321-1
		US-PATENT-CLASS-375-1	N82-12166* # c 25 ..... NASA-CASE-MSC-16497-1	US-PATENT-APPL-SN-102001
		US-PATENT-4,279,018	US-PATENT-APPL-SN-041145	US-PATENT-CLASS-356-349
N81-33448* # c 35		NASA-CASE-NPO-14258-1	US-PATENT-CLASS-204-11T	US-PATENT-CLASS-356-386
		US-PATENT-APPL-SN-853349	US-PATENT-CLASS-204-195S	US-PATENT-4,299,492
		US-PATENT-APPL-SN-972252	US-PATENT-CLASS-204-263	N82-16408* # c 37 ..... NASA-CASE-MSC-18422-1
		US-PATENT-CLASS-350-370	US-PATENT-CLASS-204-264	US-PATENT-APPL-SN-102593
		US-PATENT-CLASS-356-350	US-PATENT-CLASS-204-266	US-PATENT-CLASS-244-113
		US-PATENT-CLASS-356-351	US-PATENT-CLASS-204-275	US-PATENT-CLASS-244-163
		US-PATENT-4,280,766	US-PATENT-CLASS-204-276	US-PATENT-CLASS-244-217
N81-33482* # c 37		NASA-CASE-NPO-15227-1	US-PATENT-CLASS-204-278	US-PATENT-CLASS-277-189
		US-PATENT-APPL-SN-163840	US-PATENT-CLASS-23-230PC	US-PATENT-CLASS-277-81R
		US-PATENT-CLASS-118-50	US-PATENT-CLASS-23-232E	US-PATENT-CLASS-418-113
		US-PATENT-CLASS-118-52	US-PATENT-CLASS-422-80	US-PATENT-CLASS-418-142
		US-PATENT-CLASS-269-21	US-PATENT-4,293,522	US-PATENT-4,290,612
		US-PATENT-CLASS-427-240	N82-12297* # c 32 ..... NASA-CASE-NPO-14054-1	N82-16474* # c 44 ..... NASA-CASE-MFS-23775-1
		US-PATENT-4,280,689	US-PATENT-APPL-SN-969761	US-PATENT-APPL-SN-098569
N81-33483* # c 37		NASA-CASE-FRC-11044-1		

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		US-PATENT-4,282,752				US-PATENT-CLASS-264-453				US-PATENT-4,307,024
N82-16475* #	c 44	NASA-CASE-NPO-15071-1				US-PATENT-CLASS-264-53		N82-24338* #	c 27	NASA-CASE-ARC-11253-2
		US-PATENT-APPL-SN-150115				US-PATENT-CLASS-427-115				US-PATENT-APPL-SN-028301
		US-PATENT-CLASS-126-438				US-PATENT-CLASS-427-244				US-PATENT-APPL-SN-145284
		US-PATENT-CLASS-250-527				US-PATENT-CLASS-427-246				US-PATENT-CLASS-528-310
		US-PATENT-CLASS-48-89				US-PATENT-4,133,941				US-PATENT-CLASS-528-328
		US-PATENT-CLASS-48-99				US-PATENT-4,309,372				US-PATENT-CLASS-528-362
		US-PATENT-4,290,779				NASA-CASE-XLA-8914-2				US-PATENT-CLASS-528-401
N82-16747* #	c 60	NASA-CASE-GSC-12430-1		N82-21269* #	c 25	US-PATENT-APPL-SN-862181				US-PATENT-CLASS-528-422
		US-PATENT-APPL-SN-129779				US-PATENT-APPL-SN-810576		N82-24339* #	c 27	US-PATENT-4,273,918
		US-PATENT-CLASS-370-100				US-PATENT-CLASS-210-321.1				US-PATENT-APPL-SN-147700
		US-PATENT-CLASS-375-106				US-PATENT-CLASS-55-158				US-PATENT-CLASS-102-289
		US-PATENT-CLASS-375-114				US-PATENT-4,302,223				US-PATENT-CLASS-244-121
		US-PATENT-CLASS-375-118				NASA-CASE-NPO-14395-1				US-PATENT-CLASS-244-158A
		US-PATENT-4,298,987				US-PATENT-APPL-SN-961833				US-PATENT-CLASS-244-180
N82-16800* #	c 71	NASA-CASE-FRC-11062-1				US-PATENT-CLASS-104-83				US-PATENT-CLASS-428-192
		US-PATENT-APPL-SN-185669				US-PATENT-CLASS-105-1A				US-PATENT-CLASS-428-193
		US-PATENT-CLASS-181-214				US-PATENT-CLASS-105-171				US-PATENT-CLASS-428-241
		US-PATENT-4,300,856				US-PATENT-CLASS-105-180				US-PATENT-CLASS-428-242
N82-18314* #	c 20	NASA-CASE-GSC-12194-2				US-PATENT-CLASS-105-218R				US-PATENT-CLASS-428-245
		US-PATENT-APPL-SN-819029				US-PATENT-CLASS-248-425				US-PATENT-CLASS-428-251
		US-PATENT-APPL-SN-971474				US-PATENT-4,301,740				US-PATENT-CLASS-428-257
		US-PATENT-CLASS-60-200R				NASA-CASE-ARC-11325-1				US-PATENT-CLASS-428-260
		US-PATENT-CLASS-60-39.46M				US-PATENT-APPL-SN-812081-2				US-PATENT-CLASS-428-266
		US-PATENT-4,288,982				US-PATENT-APPL-SN-796258				US-PATENT-CLASS-428-447
N82-18389* #	c 27	NASA-CASE-ARC-11176-1		N82-22496* #	c 37	US-PATENT-CLASS-128-1.2				US-PATENT-CLASS-428-448
		US-PATENT-APPL-SN-129799				US-PATENT-CLASS-128-778				US-PATENT-CLASS-428-489
		US-PATENT-CLASS-528-168				US-PATENT-CLASS-33-143C				US-PATENT-4,308,309
		US-PATENT-CLASS-528-399				US-PATENT-4,294,264		N82-24340* #	c 27	NASA-CASE-MFS-25181-1
		US-PATENT-CLASS-528-4				NASA-CASE-FRC-11052-1				US-PATENT-APPL-SN-218585
		US-PATENT-CLASS-528-6				US-PATENT-APPL-SN-129783				US-PATENT-CLASS-156-315
		US-PATENT-CLASS-528-7				US-PATENT-CLASS-244-168				US-PATENT-CLASS-156-338
		US-PATENT-CLASS-568-2				US-PATENT-CLASS-244-175				US-PATENT-CLASS-428-332
		US-PATENT-CLASS-568-4				US-PATENT-CLASS-244-190				US-PATENT-CLASS-428-339
		US-PATENT-CLASS-568-5				US-PATENT-CLASS-318-580				US-PATENT-CLASS-428-462
		US-PATENT-4,288,585				US-PATENT-4,326,685				US-PATENT-CLASS-428-466
N82-18401* #	c 28	NASA-CASE-ARC-11245-1				NASA-CASE-LAR-12441-1		N82-24415* #	c 33	NASA-CASE-LEW-13282-1
		US-PATENT-APPL-SN-086683				US-PATENT-APPL-SN-145210				US-PATENT-APPL-SN-073579
		US-PATENT-CLASS-239-690				US-PATENT-CLASS-73-147				US-PATENT-CLASS-315-3.6
		US-PATENT-CLASS-361-226				US-PATENT-4,327,581				US-PATENT-CLASS-315-5.38
		US-PATENT-CLASS-361-230				NASA-CASE-NPO-14542-1				US-PATENT-4,277,721
		US-PATENT-4,303,961				US-PATENT-APPL-SN-030831		N82-24416* #	c 33	NASA-CASE-LAR-12633-1
N82-18443* #	c 32	NASA-CASE-NPO-14632-1				US-PATENT-CLASS-166-287				US-PATENT-APPL-SN-135039
		US-PATENT-APPL-SN-092143				US-PATENT-CLASS-166-303				US-PATENT-CLASS-358-213
		US-PATENT-CLASS-367-100				US-PATENT-CLASS-208-241				US-PATENT-4,279,001
		US-PATENT-CLASS-367-102				US-PATENT-4,310,049		N82-24417* #	c 33	NASA-CASE-FRC-11025-1
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		US-PATENT-4,287,578				US-PATENT-APPL-SN-053572				US-PATENT-CLASS-328-167
N82-18493* #	c 33	NASA-CASE-FRC-11041-1				US-PATENT-CLASS-343-17.1PF				US-PATENT-CLASS-330-109
		US-PATENT-APPL-SN-126064				US-PATENT-CLASS-343-5DP				US-PATENT-CLASS-330-290
		US-PATENT-CLASS-318-561				US-PATENT-CLASS-343-7.5				US-PATENT-CLASS-330-294
		US-PATENT-CLASS-318-620				US-PATENT-CLASS-356-5				US-PATENT-CLASS-330-306
		US-PATENT-CLASS-318-621				US-PATENT-CLASS-367-85				US-PATENT-CLASS-364-825
		US-PATENT-CLASS-318-622				US-PATENT-4,320,387				US-PATENT-4,275,453
		US-PATENT-4,298,833				NASA-CASE-NPO-14813-1		N82-24418* #	c 33	NASA-CASE-NPO-14556-1
N82-18494* #	c 33	NASA-CASE-FRC-11014-1				US-PATENT-APPL-SN-145282				US-PATENT-APPL-SN-023485
		US-PATENT-APPL-SN-053652				US-PATENT-CLASS-250-216				US-PATENT-CLASS-307-415
		US-PATENT-CLASS-331-113R				US-PATENT-CLASS-250-235				US-PATENT-CLASS-328-67
		US-PATENT-CLASS-363-132				US-PATENT-4,320,290				US-PATENT-CLASS-331-94.5G
		US-PATENT-CLASS-363-17				NASA-CASE-LAR-12412-1				US-PATENT-CLASS-331-94.5PE
		US-PATENT-CLASS-363-61				US-PATENT-APPL-SN-067595				US-PATENT-CLASS-333-20
		US-PATENT-4,298,926				US-PATENT-CLASS-244-213				US-PATENT-4,275,317
N82-18601* #	c 37	NASA-CASE-LAR-12372-1				US-PATENT-CLASS-244-226		N82-24419* #	c 33	NASA-CASE-GSC-12415-1
		US-PATENT-APPL-SN-108107				US-PATENT-CLASS-244-78				US-PATENT-APPL-SN-043943
		US-PATENT-CLASS-188-371				US-PATENT-CLASS-74-479				US-PATENT-CLASS-165-32
		US-PATENT-CLASS-244-110C				US-PATENT-CLASS-74-480R				US-PATENT-CLASS-62-383
		US-PATENT-CLASS-280-805				US-PATENT-4,272,046				US-PATENT-4,281,708
		US-PATENT-CLASS-57-906				NASA-CASE-ARC-11158-1		N82-24420* #	c 33	NASA-CASE-ARC-11116-1
		US-PATENT-4,304,320				US-PATENT-APPL-SN-053566				US-PATENT-APPL-SN-069485
N82-18686* #	c 44	NASA-CASE-MFS-25287-1				US-PATENT-CLASS-434-42				US-PATENT-CLASS-324-51
		US-PATENT-APPL-SN-098570				US-PATENT-CLASS-434-43				US-PATENT-CLASS-324-52
		US-PATENT-CLASS-126-422				US-PATENT-4,313,726				US-PATENT-4,282,479
		US-PATENT-CLASS-126-429				NASA-CASE-ARC-11256-1		N82-24421* #	c 33	NASA-CASE-GSC-12518-1
		US-PATENT-CLASS-126-430				US-PATENT-APPL-SN-032305				US-PATENT-APPL-SN-119336
		US-PATENT-4,304,219				US-PATENT-CLASS-102-504				US-PATENT-CLASS-310-12
N82-19029* #	c 74	NASA-CASE-NPO-15036-1				US-PATENT-CLASS-242-128				US-PATENT-CLASS-318-135
		US-PATENT-APPL-SN-188160				US-PATENT-4,271,761				US-PATENT-CLASS-335-229
		US-PATENT-CLASS-455-610				NASA-CASE-FRC-11026-1				US-PATENT-CLASS-335-266
		US-PATENT-CLASS-455-612				US-PATENT-APPL-SN-043944				US-PATENT-4,315,197
		US-PATENT-CLASS-455-615				US-PATENT-CLASS-228-157		N82-24422* #	c 33	NASA-CASE-GSC-12595-1
		US-PATENT-CLASS-455-617				US-PATENT-CLASS-244-119				US-PATENT-APPL-SN-206506
		US-PATENT-4,287,606				US-PATENT-CLASS-244-123				US-PATENT-CLASS-336-120
N82-19540* #	c 37	NASA-CASE-LEW-12131-3				US-PATENT-CLASS-428-593				US-PATENT-CLASS-336-83
		US-PATENT-APPL-SN-096255				US-PATENT-CLASS-428-594				US-PATENT-4,321,572
		US-PATENT-APPL-SN-801290				US-PATENT-CLASS-428-604				NASA-CASE-MSC-18407-1
		US-PATENT-APPL-SN-931090				US-PATENT-4,292,375		N82-24427* #	c 33	US-PATENT-APPL-SN-293419
		US-PATENT-CLASS-415-174				NASA-CASE-ARC-11097-1				US-PATENT-APPL-SN-178195
		US-PATENT-CLASS-415-196				US-PATENT-CLASS-260-386				US-PATENT-CLASS-29-613
		US-PATENT-4,135,851				US-PATENT-CLASS-260-389				US-PATENT-CLASS-338-25
		US-PATENT-4,207,024				US-PATENT-CLASS-528-402		N82-24470* #	c 35	US-PATENT-CLASS-338-275
		US-PATENT-4,295,786				US-PATENT-CLASS-570-123				US-PATENT-CLASS-338-28
N82-20544* #	c 37	NASA-CASE-LAR-12801-1								
		US-PATENT-APPL-SN-309291								
N82-21268* #	c 25	NASA-CASE-LEW-12358-2								
		US-PATENT-APPL-SN-776146								

		US-PATENT-4,317,102			US-PATENT-CLASS-244.12.2			US-PATENT-CLASS-357-63			
N82-24471* #	c 35	NASA-CASE-GSC-12354-1			US-PATENT-CLASS-244-23C			US-PATENT-4,311,870			
		US-PATENT-APPL-SN-128229			US-PATENT-CLASS-244-34A		N82-26987* #	c 54	NASA-CASE-ARC-11314-1		
		US-PATENT-CLASS-250-385			US-PATENT-CLASS-244-93				US-PATENT-APPL-SN-168943		
		US-PATENT-CLASS-250-386			US-PATENT-4,307,856				US-PATENT-CLASS-73-862.08		
		US-PATENT-CLASS-250-389			N82-26293* #	c 07	NASA-CASE-LEW-13199-1		US-PATENT-4,311,055		
		US-PATENT-CLASS-29-25.14			US-PATENT-APPL-SN-025301			N82-27086* #	c 71	NASA-CASE-NPO-15562-1	
		US-PATENT-CLASS-313-348			US-PATENT-CLASS-244-110B					US-PATENT-APPL-SN-364097	
		US-PATENT-CLASS-313-93			US-PATENT-CLASS-60-226A			N82-27558* #	c 32	NASA-CASE-MS-18532-1	
		US-PATENT-4,325,001			US-PATENT-4,278,220					US-PATENT-APPL-SN-172099	
N82-24490* #	c 37	NASA-CASE-LAR-12315-1			N82-26384* #	c 24	NASA-CASE-LAR-11688-1			US-PATENT-CLASS-343-789	
		US-PATENT-APPL-SN-096257					US-PATENT-APPL-SN-878540			US-PATENT-CLASS-343-895	
		US-PATENT-CLASS-220-378					US-PATENT-CLASS-244-119			US-PATENT-4,315,266	
		US-PATENT-CLASS-277-1					US-PATENT-CLASS-244-123		N82-28279* #	c 05	NASA-CASE-LAR-12175-1
		US-PATENT-CLASS-277-105					US-PATENT-CLASS-244-132				US-PATENT-APPL-SN-079913
		US-PATENT-CLASS-277-2					US-PATENT-4,310,132				US-PATENT-CLASS-244-48
		US-PATENT-CLASS-277-204			N82-26387* #	c 24	NASA-CASE-MS-18934-3				US-PATENT-4,330,100
		US-PATENT-CLASS-277-4					US-PATENT-APPL-SN-361711		N82-28353* #	c 23	NASA-CASE-ARC-11267-2
		US-PATENT-CLASS-277-59					NASA-CASE-MS-18796-1				US-PATENT-APPL-SN-163838
		US-PATENT-CLASS-277-72R					US-PATENT-APPL-SN-367121				US-PATENT-CLASS-528-401
		US-PATENT-CLASS-285-37			N82-26396* #	c 25	NASA-CASE-LAR-12705-1				US-PATENT-CLASS-528-422
		US-PATENT-4,309,039					US-PATENT-APPL-SN-135058				US-PATENT-CLASS-547-131
N82-24491* #	c 37	NASA-CASE-MS-18430-1					US-PATENT-CLASS-252-514				US-PATENT-CLASS-564-229
		US-PATENT-APPL-SN-113015					US-PATENT-4,311,615				US-PATENT-4,316,035
		US-PATENT-CLASS-156-84			N82-26431* #	c 26	NASA-CASE-LEW-13324-1		N82-28368* #	c 25	NASA-CASE-NPO-15015-1
		US-PATENT-CLASS-156-85					US-PATENT-APPL-SN-375784				US-PATENT-APPL-SN-145207
		US-PATENT-CLASS-156-86			N82-26460* #	c 27	NASA-CASE-MS-18851-1				US-PATENT-CLASS-203-12
		US-PATENT-CLASS-264-230					US-PATENT-APPL-SN-342858				US-PATENT-CLASS-422-186
		US-PATENT-CLASS-264-342R			N82-26568* #	c 33	NASA-CASE-LEW-12296-1				US-PATENT-CLASS-422-198
		US-PATENT-4,269,640					US-PATENT-APPL-SN-122966				US-PATENT-CLASS-423-235
N82-24492* #	c 37	NASA-CASE-ARC-11110-1					US-PATENT-CLASS-315-3.5				US-PATENT-CLASS-423-539
		US-PATENT-APPL-SN-945040					US-PATENT-CLASS-315-3.6				US-PATENT-CLASS-423-540
		US-PATENT-CLASS-118-320					US-PATENT-CLASS-330-43				US-PATENT-CLASS-423-542
		US-PATENT-CLASS-118-500					US-PATENT-4,315,194				US-PATENT-CLASS-423-579
		US-PATENT-CLASS-118-503			N82-26569* #	c 33	NASA-CASE-MFS-23828-1				US-PATENT-CLASS-423-648R
		US-PATENT-CLASS-118-505					US-PATENT-APPL-SN-111436				US-PATENT-4,314,984
		US-PATENT-CLASS-427-425					US-PATENT-CLASS-318-254		N82-28440* #	c 27	NASA-CASE-LEW-13120-1
		US-PATENT-4,312,292					US-PATENT-CLASS-318-806				US-PATENT-APPL-SN-218587
N82-24493* #	c 37	NASA-CASE-NPO-15115-1					US-PATENT-CLASS-318-812				US-PATENT-CLASS-204-192E
		US-PATENT-APPL-SN-154725					US-PATENT-CLASS-318-830				US-PATENT-CLASS-204-192EC
		US-PATENT-CLASS-74-18.1					US-PATENT-4,313,077				US-PATENT-CLASS-264-22
		US-PATENT-CLASS-74-18.2			N82-26570* #	c 33	NASA-CASE-LAR-12659-1				US-PATENT-CLASS-264-220
		US-PATENT-CLASS-92-37					US-PATENT-APPL-SN-171828				US-PATENT-CLASS-428-141
		US-PATENT-4,311,057					US-PATENT-CLASS-340-347DD				US-PATENT-4,329,385
N82-24494* #	c 37	NASA-CASE-MS-18526-1					US-PATENT-4,313,103		N82-28441* #	c 27	NASA-CASE-LEW-13343-1
		US-PATENT-APPL-SN-119335			N82-26571* #	c 33	NASA-CASE-LAR-12595-1				US-PATENT-APPL-SN-161254
		US-PATENT-CLASS-285-159					US-PATENT-APPL-SN-070774				US-PATENT-CLASS-427-205
		US-PATENT-CLASS-285-401					US-PATENT-CLASS-156-157				US-PATENT-CLASS-427-253
		US-PATENT-CLASS-285-89					US-PATENT-CLASS-156-272				US-PATENT-CLASS-427-405
		US-PATENT-CLASS-403-315					US-PATENT-CLASS-156-379.7				US-PATENT-CLASS-428-938
		US-PATENT-4,320,911					US-PATENT-CLASS-156-71				US-PATENT-CLASS-428-941
N82-24639* #	c 44	NASA-CASE-MFS-23830-1					US-PATENT-CLASS-219-10.41		N82-28442* #	c 27	US-PATENT-4,310,574
		US-PATENT-APPL-SN-129780					US-PATENT-CLASS-219-10.53				NASA-CASE-NPO-14845-1
		US-PATENT-CLASS-415-DIG.8					US-PATENT-CLASS-219-545				US-PATENT-APPL-SN-219680
		US-PATENT-CLASS-415-2R					US-PATENT-CLASS-428-247				US-PATENT-CLASS-264-5
		US-PATENT-4,309,146					US-PATENT-4,313,777				US-PATENT-CLASS-425-6
N82-24640* #	c 44	NASA-CASE-LAR-12148-1			N82-26572* #	c 33	NASA-CASE-LAR-12465-1				US-PATENT-CLASS-65-142
		US-PATENT-APPL-SN-051275					US-PATENT-APPL-SN-106136				US-PATENT-CLASS-65-21.4
		US-PATENT-CLASS-60-518					US-PATENT-CLASS-361-283				US-PATENT-CLASS-65-22
		US-PATENT-CLASS-60-641.14					US-PATENT-CLASS-367-181				US-PATENT-4,313,745
		US-PATENT-4,326,381					US-PATENT-CLASS-73-724		N82-28545* #	c 33	NASA-CASE-MFS-23776-1
N82-24641* #	c 44	NASA-CASE-GSC-10019-1					US-PATENT-4,310,906				US-PATENT-APPL-SN-145272
		US-PATENT-APPL-SN-680048			N82-26628* #	c 35	NASA-CASE-LAR-12474-1				US-PATENT-CLASS-250-214
		US-PATENT-CLASS-136-6					US-PATENT-APPL-SN-171834				US-PATENT-CLASS-250-221
		US-PATENT-3,498,841					US-PATENT-CLASS-352-171				US-PATENT-4,319,133
N82-24642* #	c 44	NASA-CASE-GSC-10350-1					US-PATENT-CLASS-354-217				NASA-CASE-MS-20181-1
		US-PATENT-APPL-SN-679980					US-PATENT-CLASS-354-289		N82-28549* #	c 33	US-PATENT-APPL-SN-392093
		US-PATENT-CLASS-136-6					US-PATENT-4,311,378				NASA-CASE-LAR-12709-1
		US-PATENT-3,498,840			N82-26631* #	c 35	NASA-CASE-MFS-25707-1				US-PATENT-APPL-SN-235796
N82-24643* #	c 44	NASA-CASE-GSC-10017-1					US-PATENT-APPL-SN-359627				US-PATENT-CLASS-204-195B
		US-PATENT-APPL-SN-679996			N82-26672* #	c 37	NASA-CASE-MS-18538-1				US-PATENT-CLASS-435-291
		US-PATENT-CLASS-136-6					US-PATENT-APPL-SN-138944				US-PATENT-CLASS-435-34
		US-PATENT-3,519,484					US-PATENT-CLASS-30-102				US-PATENT-CLASS-435-39
N82-24644* #	c 44	NASA-CASE-GSC-10018-1					US-PATENT-4,305,205				US-PATENT-4,335,206
		US-PATENT-APPL-SN-679987			N82-26673* #	c 37	NASA-CASE-MS-18742-1		N82-28616* #	c 36	NASA-CASE-NPO-14782-1
		US-PATENT-CLASS-136-6					US-PATENT-APPL-SN-293417				US-PATENT-APPL-SN-119339
		US-PATENT-3,519,483			N82-26674* #	c 37	NASA-CASE-LEW-13268-2				US-PATENT-CLASS-330-4.3
N82-24645* #	c 44	NASA-CASE-GSC-10349-1					US-PATENT-APPL-SN-325931				US-PATENT-CLASS-372-56
		US-PATENT-APPL-SN-658999			N82-26676* #	c 37	NASA-CASE-LAR-12729-1				US-PATENT-CLASS-372-58
		US-PATENT-CLASS-136-148					US-PATENT-APPL-SN-371353				US-PATENT-CLASS-372-82
		US-PATENT-3,506,496			N82-26776* #	c 44	NASA-CASE-NPO-15183-1				US-PATENT-4,328,464
N82-24779* #	c 47	NASA-CASE-KSC-11099-1					US-PATENT-APPL-SN-173519		N82-28780* #	c 44	NASA-CASE-NPO-13689-4
		US-PATENT-APPL-SN-043945					US-PATENT-CLASS-62-148				US-PATENT-APPL-SN-225501
		US-PATENT-CLASS-324-72					US-PATENT-CLASS-62-235.1				US-PATENT-APPL-SN-597430
		US-PATENT-CLASS-324-77R					US-PATENT-CLASS-62-238.3				US-PATENT-APPL-SN-683073
		US-PATENT-4,272,720					US-PATENT-CLASS-62-239				US-PATENT-APPL-SN-837513
N82-24839* #	c 60	NASA-CASE-FRC-11042-1					US-PATENT-CLASS-62-244				US-PATENT-APPL-SN-93714
		US-PATENT-APPL-SN-129778					US-PATENT-CLASS-62-476				US-PATENT-CLASS-148-175
		US-PATENT-CLASS-254-131					US-PATENT-4,307,575				US-PATENT-CLASS-29-572
		US-PATENT-CLASS-29-267			N82-26777* #	c 44	NASA-CASE-NPO-15179-1				US-PATENT-CLASS-427-531
		US-PATENT-CLASS-29-764					US-PATENT-APPL-SN-185867				US-PATENT-CLASS-427-74
		US-PATENT-4,307,510					US-PATENT-CLASS-136-261				US-PATENT-4,278,830
N82-25484* #	c 35	NASA-CASE-NPO-15494-1					US-PATENT-CLASS-136-290				US-PATENT-4,321,099
		US-PATENT-APPL-SN-325885					US-PATENT-CLASS-148-1.5		N82-29002* #	c 54	NASA-CASE-XMS-03694-1
N82-26277* #	c 05	NASA-CASE-FRC-11007-2					US-PATENT-CLASS-219-121LN				US-PATENT-APPL-SN-394280
		US-PATENT-APPL-SN-043911					US-PATENT-CLASS-357-30				US-PATENT-CLASS-165-46

N82-29013* #	c 60	US-PATENT-3,295,594 NASA-CASE-MS-C-18498-1 US-PATENT-APPL-SN-173518 US-PATENT-CLASS-244-194 US-PATENT-CLASS-318-564 US-PATENT-CLASS-371-68 US-PATENT-4,327,437	N82-29538* #	c 33	US-PATENT-4,338,368 NASA-CASE-NPO-15066-1 US-PATENT-APPL-SN-191744 US-PATENT-CLASS-179-18GF US-PATENT-CLASS-340-825.89 US-PATENT-CLASS-370-67 US-PATENT-4,331,956	N82-32366* #	c 07	US-PATENT-CLASS-136-249 US-PATENT-CLASS-357-30 US-PATENT-4,341,918 NASA-CASE-LEW-12938-1 US-PATENT-APPL-SN-060449 US-PATENT-CLASS-415-145 US-PATENT-CLASS-415-178 US-PATENT-CLASS-60-39.07 US-PATENT-CLASS-60-39.29 US-PATENT-CLASS-60-726 US-PATENT-4,329,114
N82-29330* #	c 09	NASA-CASE-KSC-11042-1 US-PATENT-APPL-SN-154663 US-PATENT-APPL-SN-862878 US-PATENT-CLASS-53-429 US-PATENT-CLASS-8-150 US-PATENT-4,244,810 US-PATENT-4,313,291	N82-29539* #	c 33	NASA-CASE-NPO-14311-1 US-PATENT-APPL-SN-969762 US-PATENT-CLASS-328-166 US-PATENT-CLASS-455-202 US-PATENT-CLASS-455-208 US-PATENT-CLASS-455-234 US-PATENT-CLASS-455-306 US-PATENT-4,336,616	N82-32373* #	c 08	NASA-CASE-LAR-12468-1 US-PATENT-APPL-SN-135057 US-PATENT-CLASS-244-118.1 US-PATENT-CLASS-244-137R US-PATENT-CLASS-89-1.5G US-PATENT-4,343,447
N82-29358* #	c 23	NASA-CASE-LAR-10423-1 US-PATENT-APPL-SN-877445 US-PATENT-CLASS-260-65 US-PATENT-3,657,190	N82-29589* #	c 36	NASA-CASE-NPO-15111-1 US-PATENT-APPL-SN-150040 US-PATENT-CLASS-350-358 US-PATENT-4,332,441	N82-32417* #	c 24	NASA-CASE-LAR-12620-1 US-PATENT-APPL-SN-072857 US-PATENT-CLASS-244-132 US-PATENT-CLASS-244-158A US-PATENT-CLASS-428-594 US-PATENT-CLASS-428-604 US-PATENT-CLASS-428-607 US-PATENT-CLASS-428-608 US-PATENT-4,344,591
N82-29382* #	c 24	NASA-CASE-MS-C-18223-1 US-PATENT-APPL-SN-219681 US-PATENT-CLASS-128-280 US-PATENT-CLASS-128-283 US-PATENT-CLASS-128-284 US-PATENT-CLASS-128-285 US-PATENT-CLASS-128-288 US-PATENT-CLASS-128-291 US-PATENT-CLASS-128-296 US-PATENT-CLASS-428-283 US-PATENT-CLASS-428-284 US-PATENT-CLASS-428-286 US-PATENT-CLASS-428-287 US-PATENT-CLASS-428-288 US-PATENT-4,338,371	N82-29708* #	c 44	NASA-CASE-LEW-13171-1 US-PATENT-APPL-SN-238790 US-PATENT-CLASS-429-144 US-PATENT-CLASS-429-251 US-PATENT-CLASS-429-254 US-PATENT-4,331,748	N82-32659* #	c 35	NASA-CASE-GSC-12587-1 US-PATENT-APPL-SN-173524 US-PATENT-CLASS-250-369 US-PATENT-4,345,153
N82-29370* #	c 25	NASA-CASE-XGS-05584-1 NASA-CASE-XGS-07375-1 NASA-CASE-XGS-07397-1 US-PATENT-APPL-SN-446071 US-PATENT-CLASS-106-197 US-PATENT-3,442,674	N82-29709* #	c 44	NASA-CASE-LEW-13401-1 US-PATENT-APPL-SN-219678 US-PATENT-CLASS-136-249 US-PATENT-CLASS-148-1.5 US-PATENT-CLASS-29-572 US-PATENT-CLASS-357-30 US-PATENT-4,335,503	N82-32712* #	c 36	NASA-CASE-LAR-12328-1 US-PATENT-APPL-SN-073477 US-PATENT-CLASS-350-453 US-PATENT-CLASS-356-28.5 US-PATENT-4,346,990
N82-29371* #	c 25	NASA-CASE-NPO-14902-1 US-PATENT-APPL-SN-156790 US-PATENT-CLASS-201-17 US-PATENT-CLASS-44-1SR US-PATENT-4,325,707	N82-29710* #	c 44	NASA-CASE-NPO-15269-1 US-PATENT-APPL-SN-220214 US-PATENT-CLASS-204-290F US-PATENT-CLASS-204-290R US-PATENT-CLASS-429-193 US-PATENT-CLASS-429-33 US-PATENT-CLASS-429-40 US-PATENT-4,331,742	N82-32730* #	c 37	NASA-CASE-GSC-12584-1 US-PATENT-APPL-SN-182679 US-PATENT-CLASS-125-23R US-PATENT-CLASS-225-103 US-PATENT-4,343,287
N82-29415* #	c 26	NASA-CASE-LEW-13168-1 US-PATENT-APPL-SN-102003 US-PATENT-CLASS-204-192C US-PATENT-4,336,117	N82-29862* #	c 52	NASA-CASE-LAR-12471-1 US-PATENT-APPL-SN-178193 US-PATENT-CLASS-128-62A US-PATENT-CI ASS-433-118 US-PATENT-CLASS-433-125 US-PATENT-CLASS-433-86 US-PATENT-4,331,422	N82-32731* #	c 37	NASA-CASE-MFS-23846-1 US-PATENT-APPL-SN-168944 US-PATENT-CLASS-294-116 US-PATENT-CLASS-414-222 US-PATENT-CLASS-414-226 US-PATENT-CLASS-414-739 US-PATENT-4,343,584
N82-29451* #	c 27	NASA-CASE-HQN-10274-1 US-PATENT-APPL-SN-683465 US-PATENT-CLASS-106-52 US-PATENT-3,573,078	N82-29863* #	c 52	NASA-CASE-GSC-12560-1 US-PATENT-APPL-SN-153246 US-PATENT-CLASS-128-421 US-PATENT-4,308,866	N82-32732* #	c 37	NASA-CASE-LAR-12482-1 US-PATENT-APPL-SN-100611 US-PATENT-CLASS-403-217 US-PATENT-CLASS-403-317 US-PATENT-CLASS-403-331 US-PATENT-CLASS-403-340 US-PATENT-CLASS-52-81 US-PATENT-4,340,318
N82-29452* #	c 27	NASA-CASE-HQN-10931-2 US-PATENT-APPL-SN-246295 US-PATENT-APPL-SN-874674 US-PATENT-CLASS-106-50 US-PATENT-CLASS-106-52 US-PATENT-CLASS-106-54 US-PATENT-3,785,836	N82-30071* #	c 74	NASA-CASE-MS-C-18627-1 US-PATENT-APPL-SN-186881 US-PATENT-CLASS-250-226 US-PATENT-CLASS-250-231R US-PATENT-CLASS-374-162R US-PATENT-4,338,516	N82-32841* #	c 44	NASA-CASE-LAR-12513-1 US-PATENT-APPL-SN-181256 US-PATENT-CLASS-250-330 US-PATENT-CLASS-250-370 US-PATENT-4,331,873
N82-29453* #	c 27	NASA-CASE-LEW-13268-1 US-PATENT-APPL-SN-145209 US-PATENT-CLASS-415-174 US-PATENT-CLASS-427-34 US-PATENT-CLASS-427-423 US-PATENT-4,336,276	N82-30105* #	c 76	NASA-CASE-NPO-14831-1 US-PATENT-APPL-SN-233269 US-PATENT-CLASS-156-602 US-PATENT-CLASS-156-608 US-PATENT-CLASS-422-246 US-PATENT-4,330,359	N82-33288* #	c 85	NASA-CASE-FRC-11058-1 US-PATENT-APPL-SN-175453 US-PATENT-CLASS-105-2R US-PATENT-CLASS-244-53B US-PATENT-CLASS-296-1S US-PATENT-CLASS-296-24C US-PATENT-CLASS-296-91 US-PATENT-4,343,506
N82-29454* #	c 27	NASA-CASE-HQN-10328-2 US-PATENT-APPL-SN-246294 US-PATENT-APPL-SN-874673 US-PATENT-CLASS-106-50 US-PATENT-CLASS-106-52 US-PATENT-CLASS-106-54 US-PATENT-3,811,901	N82-30371* #	c 26	NASA-CASE-LEW-13169-2 US-PATENT-APPL-SN-102003 US-PATENT-APPL-SN-191746 US-PATENT-CLASS-204-192C US-PATENT-CLASS-428-457 US-PATENT-CLASS-428-472 US-PATENT-4,341,843	N82-33520* #	c 27	NASA-CASE-KSC-11097-1 US-PATENT-APPL-SN-172100 US-PATENT-CLASS-427-140 US-PATENT-CLASS-427-372.2 US-PATENT-CLASS-427-397.7 US-PATENT-4,330,572
N82-29455* #	c 27	NASA-CASE-HQN-10595-1 US-PATENT-APPL-SN-259056 US-PATENT-APPL-SN-874675 US-PATENT-CLASS-106-50 US-PATENT-CLASS-106-52 US-PATENT-3,947,281	N82-31505* #	c 26	NASA-CASE-LEW-13339-1 US-PATENT-APPL-SN-199769 US-PATENT-CLASS-148-428 US-PATENT-CLASS-420-445 US-PATENT-CLASS-420-551 US-PATENT-CLASS-420-588 US-PATENT-4,340,425	N82-33521* #	c 27	NASA-CASE-LEW-13028-1 US-PATENT-APPL-SN-218588 US-PATENT-CLASS-204-192E US-PATENT-CLASS-204-192EC US-PATENT-CLASS-204-38B US-PATENT-CLASS-428-141 US-PATENT-4,344,996
N82-29456* #	c 27	NASA-CASE-MS-C-18741-1 US-PATENT-APPL-SN-217336 US-PATENT-CLASS-156-329 US-PATENT-CLASS-244-121 US-PATENT-CLASS-244-158A US-PATENT-CLASS-244-160 US-PATENT-CLASS-244-163 US-PATENT-CLASS-428-212 US-PATENT-CLASS-428-218 US-PATENT-CLASS-428-283 US-PATENT-CLASS-428-289 US-PATENT-CLASS-428-307.7 US-PATENT-CLASS-428-311.5 US-PATENT-CLASS-428-312.6 US-PATENT-CLASS-428-317.9 US-PATENT-CLASS-428-325 US-PATENT-CLASS-428-448 US-PATENT-CLASS-428-49	N82-31583* #	c 32	NASA-CASE-MS-C-16482-1 US-PATENT-APPL-SN-900841 US-PATENT-CLASS-178-22.16 US-PATENT-CLASS-178-22.17 US-PATENT-CLASS-364-717 US-PATENT-CLASS-375-106 US-PATENT-4,341,925	N82-33523* #	c 27	NASA-CASE-ARC-14408-1 US-PATENT-APPL-SN-403371 US-PATENT-CLASS-15670-1 US-PATENT-APPL-SN-409679
			N82-31659* #	c 35	NASA-CASE-LAR-12363-1 US-PATENT-APPL-SN-191748 US-PATENT-CLASS-250-332 US-PATENT-CLASS-250-370 US-PATENT-CLASS-29-576J US-PATENT-CLASS-29-576S US-PATENT-CLASS-29-620 US-PATENT-4,341,012	N82-33634* #	c 33	NASA-CASE-MFS-15670-1 US-PATENT-APPL-SN-409679
			N82-31690* #	c 37	NASA-CASE-MS-C-20304-1 US-PATENT-APPL-SN-393585	N82-33681* #	c 35	NASA-CASE-NPO-15617-1 US-PATENT-APPL-SN-403849
			N82-31764* #	c 44	NASA-CASE-LEW-13400-1 US-PATENT-APPL-SN-219677	N82-33996* #	c 52	NASA-CASE-NPO-14549-2 US-PATENT-APPL-SN-149526 US-PATENT-APPL-SN-918705 US-PATENT-CLASS-128-422 US-PATENT-CLASS-128-784 US-PATENT-CLASS-128-804 US-PATENT-4,346,715
						N83-10040* #	c 06	NASA-CASE-NPO-15351-1 US-PATENT-APPL-SN-224231

				US-PATENT-CLASS-343-100ME				US-PATENT-CLASS-427-90					US-PATENT-CLASS-250-351
				US-PATENT-CLASS-374-122				US-PATENT-CLASS-427-91					US-PATENT-CLASS-350-353
				US-PATENT-CLASS-374-123				US-PATENT-4,335,196					US-PATENT-4,262,198
				US-PATENT-CLASS-73-170R		N83-13978* #	c 74	NASA-CASE-ARC-11311-1		N83-19715* #	c 02	NASA-CASE-LAR-12625-1	US-PATENT-APPL-SN-456915
				US-PATENT-CLASS-73-178R				US-PATENT-APPL-SN-219640					US-PATENT-APPL-SN-248744
				US-PATENT-4,346,595				US-PATENT-CLASS-350-287		N83-19737* #	c 05	NASA-CASE-FRC-11065-1	US-PATENT-CASE-244-121
N83-10117* #	c 24			NASA-CASE-LEW-12919-1				US-PATENT-CLASS-350-486					US-PATENT-CASE-244-129.4
				US-PATENT-APPL-SN-264378				US-PATENT-4,355,870					US-PATENT-CASE-292-254
				US-PATENT-CLASS-204-192E		N83-13982* #	c 74	NASA-CASE-GSC-12761-1		N83-19890* #	c 26	NASA-CASE-NPO-15658-1	US-PATENT-APPL-SN-451896
				US-PATENT-CLASS-313-106				US-PATENT-APPL-SN-406820					US-PATENT-APPL-SN-14857-1
				US-PATENT-CLASS-313-107				NASA-CASE-LEW-12892-1					US-PATENT-CLASS-524-436
				US-PATENT-CLASS-315-5.38		N83-14692* #	c 44	US-PATENT-APPL-SN-264380					US-PATENT-CLASS-524-437
				US-PATENT-4,349,424				US-PATENT-CLASS-136-255		N83-19900* #	c 27	NASA-CASE-NPO-14857-1	US-PATENT-CLASS-524-503
N83-10126* #	c 25			NASA-CASE-MFS-25426-1				US-PATENT-CLASS-136-256					US-PATENT-CLASS-524-564
				US-PATENT-APPL-SN-254575				US-PATENT-CLASS-136-259					US-PATENT-CLASS-524-786
				US-PATENT-CLASS-204-299R				US-PATENT-4,360,701					US-PATENT-4,373,039
				US-PATENT-4,349,429		N83-14693* #	c 44	NASA-CASE-MSC-18794-1		N83-19947* #	c 31	NASA-CASE-NPO-15789-1	US-PATENT-APPL-SN-322316
N83-10170* #	c 26			NASA-CASE-LEW-12941-1				US-PATENT-APPL-SN-238785					US-PATENT-CLASS-204-129.55
				US-PATENT-APPL-SN-210632				US-PATENT-CLASS-417-399					US-PATENT-CLASS-204-129.75
				US-PATENT-CLASS-29-458				US-PATENT-CLASS-74-110					US-PATENT-4,375,396
				US-PATENT-CLASS-29-521				US-PATENT-4,360,325					NASA-CASE-NPO-14035-1
				US-PATENT-CLASS-403-282		N83-16626* #	c 33	NASA-CASE-LAR-12772-1					US-PATENT-APPL-SN-858767
				US-PATENT-4,349,954				US-PATENT-APPL-SN-199767					US-PATENT-CLASS-343-100CL
N83-10345* #	c 33			NASA-CASE-MFS-25208-1				US-PATENT-CLASS-73-579					US-PATENT-CLASS-343-5CM
				US-PATENT-APPL-SN-280154				US-PATENT-CLASS-73-597					US-PATENT-CLASS-343-9PS
				US-PATENT-CLASS-318-803				US-PATENT-CLASS-73-629					US-PATENT-4,371,873
				US-PATENT-CLASS-363-87				US-PATENT-CLASS-73-761					NASA-CASE-GSC-12795-1
				US-PATENT-4,351,022				US-PATENT-4,363,242		N83-19968* #	c 32	NASA-CASE-NPO-14035-1	US-PATENT-APPL-SN-858767
N83-10417* #	c 36			NASA-CASE-NPO-15021-1		N83-16633* #	c 33	NASA-CASE-LAR-12847-1					US-PATENT-CLASS-343-100CL
				US-PATENT-APPL-SN-130496				US-PATENT-APPL-SN-393456					US-PATENT-CLASS-343-5CM
				US-PATENT-CLASS-372-56				NASA-CASE-NPO-15213-1					US-PATENT-CLASS-343-9PS
				US-PATENT-CLASS-372-59		N83-17045* #	c 51	US-PATENT-APPL-SN-280153					US-PATENT-4,371,873
				US-PATENT-CLASS-372-60				US-PATENT-CLASS-47-58					NASA-CASE-GSC-12795-1
				US-PATENT-4,347,613				US-PATENT-CLASS-71-98		N83-20085 #	c 35	NASA-CASE-GSC-12795-1	US-PATENT-APPL-SN-462508
N83-10494* #	c 44			NASA-CASE-LEW-13131-1				US-PATENT-4,363,188					NASA-CASE-ARC-11414-1
				US-PATENT-APPL-SN-246772		N83-17235* #	c 71	NASA-CASE-LAR-12883-1					US-PATENT-APPL-SN-461714
				US-PATENT-CLASS-204-56R				US-PATENT-APPL-SN-267935					NASA-CASE-MFS-25807
				US-PATENT-4,350,574				US-PATENT-CLASS-73-147		N83-20154* #	c 37	NASA-CASE-MFS-25807	US-PATENT-APPL-SN-460733
N83-10501* #	c 44			NASA-CASE-NPO-14369-1				US-PATENT-4,363,237					NASA-CASE-MSC-18929-1
				US-PATENT-APPL-SN-126063		N83-17305* #	c 74	NASA-CASE-MFS-25312-1					US-PATENT-APPL-SN-198093
				US-PATENT-CLASS-422-200				US-PATENT-APPL-SN-187106					US-PATENT-CLASS-128-782
				US-PATENT-CLASS-422-202				US-PATENT-CLASS-350-171					US-PATENT-CLASS-358-105
				US-PATENT-CLASS-422-224				US-PATENT-4,362,361					US-PATENT-CLASS-364-413
				US-PATENT-CLASS-55-204		N83-17588* #	c 20	NASA-CASE-MFS-25843-1					US-PATENT-CLASS-364-522
				US-PATENT-4,343,772				US-PATENT-APPL-SN-444125					US-PATENT-CLASS-364-559
N83-10900* #	c 74			NASA-CASE-GSC-12608-1		N83-17628* #	c 25	NASA-CASE-LEW-13609-1					US-PATENT-CLASS-73-379
				US-PATENT-APPL-SN-195228				US-PATENT-APPL-SN-452465					US-PATENT-4,375,674
				US-PATENT-CLASS-350-170		N83-18908* #	c 27	NASA-CASE-MSC-18832-1					NASA-CASE-NPO-15625-1
				US-PATENT-CLASS-350-286				US-PATENT-APPL-SN-365950		N83-20789* #	c 76	NASA-CASE-NPO-15625-1	US-PATENT-APPL-SN-325933
				US-PATENT-4,350,410				US-PATENT-CLASS-428-241					US-PATENT-CLASS-148-173
N83-12334* #	c 33			NASA-CASE-NPO-15935-1				US-PATENT-CLASS-428-244					US-PATENT-CLASS-148-175
				US-PATENT-APPL-SN-437913				US-PATENT-CLASS-428-245					US-PATENT-CLASS-156-608
N83-13171* #	c 24			NASA-CASE-MSC-18737-1				US-PATENT-CLASS-428-260					US-PATENT-CLASS-156-624
				US-PATENT-APPL-SN-266256				US-PATENT-CLASS-428-331					US-PATENT-CLASS-156-635
				US-PATENT-CLASS-427-379				US-PATENT-CLASS-428-368					US-PATENT-CLASS-156-654
				US-PATENT-CLASS-427-384				US-PATENT-CLASS-428-902					US-PATENT-CLASS-156-662
				US-PATENT-CLASS-427-387				US-PATENT-CLASS-428-913					US-PATENT-4,373,989
				US-PATENT-CLASS-428-218				US-PATENT-CLASS-428-920					NASA-CASE-MFS-23981-1
				US-PATENT-4,358,486				US-PATENT-4,373,003		N83-20944* #	c 07	NASA-CASE-MFS-23981-1	US-PATENT-APPL-SN-231543
N83-13172* #	c 24			NASA-CASE-MSC-18736-1		N83-18975* #	c 32	NASA-CASE-NPO-14998-1					US-PATENT-CLASS-244-159
				US-PATENT-APPL-SN-266254				US-PATENT-APPL-SN-195547					US-PATENT-CLASS-244-173
				US-PATENT-CLASS-244-158A				US-PATENT-CLASS-250-203R					US-PATENT-CLASS-322-2R
				US-PATENT-CLASS-427-140				US-PATENT-CLASS-343-100CL					US-PATENT-CLASS-339-3R
				US-PATENT-CLASS-427-292				US-PATENT-CLASS-364-822					US-PATENT-CLASS-339-5R
				US-PATENT-CLASS-427-302				US-PATENT-CLASS-364-861					US-PATENT-CLASS-343-DIG2
				US-PATENT-CLASS-427-379				US-PATENT-4,371,946					US-PATENT-4,377,266
				US-PATENT-CLASS-427-384		N83-18996* #	c 33	NASA-CASE-NPO-14567-1		N83-20995* #	c 17	NASA-CASE-LAR-13006-1	US-PATENT-APPL-SN-470113
				US-PATENT-CLASS-427-387				US-PATENT-APPL-SN-038550					NASA-CASE-LEW-13269-1
				US-PATENT-CLASS-428-63				US-PATENT-APPL-SN-180230		N83-20996* #	c 18	NASA-CASE-LEW-13269-1	US-PATENT-APPL-SN-242795
				US-PATENT-4,358,480				US-PATENT-CLASS-250-311					US-PATENT-CLASS-415-174
N83-13187* #	c 25			NASA-CASE-MFS-25306-1				US-PATENT-CLASS-324-73R					US-PATENT-CLASS-415-197
				US-PATENT-APPL-SN-309293				US-PATENT-CLASS-356-394					US-PATENT-4,377,371
				US-PATENT-CLASS-204-280R				US-PATENT-4,358,732					NASA-CASE-ARC-11367-1
				US-PATENT-CLASS-204-299R		N83-19015* #	c 34	NASA-CASE-MFS-25282-1					US-PATENT-APPL-SN-460511
				US-PATENT-4,358,358				US-PATENT-APPL-SN-263828					NASA-CASE-LAR-12469-1
N83-13188* #	c 25			NASA-CASE-LEW-13504-1				US-PATENT-CLASS-378-2		N83-21238* #	c 33	NASA-CASE-ARC-11367-1	US-PATENT-APPL-SN-195223
				US-PATENT-APPL-SN-272234				US-PATENT-CLASS-378-43					US-PATENT-CLASS-250-338
				US-PATENT-CLASS-264-104				US-PATENT-4,370,750					US-PATENT-CLASS-250-372
				US-PATENT-CLASS-429-206				NASA-CASE-LAR-12361-1					US-PATENT-CLASS-250-474-1
				US-PATENT-CLASS-429-253		N83-19091* #	c 37	US-PATENT-APPL-SN-182880					US-PATENT-CLASS-356-51
				US-PATENT-CLASS-525-61				US-PATENT-CLASS-411-353					US-PATENT-4,372,680
				US-PATENT-4,357,402				US-PATENT-CLASS-411-517					NASA-CASE-MSC-18723-1
N83-13323* #	c 32			NASA-CASE-KSC-11025-1				US-PATENT-4,371,301		N83-21312* #	c 35	NASA-CASE-MSC-18723-1	US-PATENT-APPL-SN-234223
				US-PATENT-APPL-SN-061327				NASA-CASE-LEW-12253-1					US-PATENT-CLASS-73-818
				US-PATENT-CLASS-371-6				US-PATENT-APPL-SN-243682					US-PATENT-4,377,089
				US-PATENT-4,358,846		N83-19596* #	c 74	US-PATENT-CLASS-165-104.26					NASA-CASE-MFS-25833-1
N83-13360* #	c 33			NASA-CASE-GSC-12782-1				US-PATENT-CLASS-165-134R					US-PATENT-APPL-SN-473827
				US-PATENT-APPL-SN-399074				US-PATENT-CLASS-29-157.3H					NASA-CASE-LAR-12458-1
N83-13579* #	c 44			NASA-CASE-LEW-13620-1				US-PATENT-4,372,377		N83-21503* #	c 44	NASA-CASE-LAR-12458-1	US-PATENT-APPL-SN-274705
				US-PATENT-APPL-SN-242796				NASA-CASE-NPO-14864-1					US-PATENT-CLASS-73-147
				US-PATENT-CLASS-136-256				US-PATENT-APPL-SN-061822					US-PATENT-4,372,158
				US-PATENT-CLASS-136-259				US-PATENT-CLASS-250-227					NASA-CASE-LAR-12720-1
				US-PATENT-CLASS-29-572				US-PATENT-CLASS-250-332		N83-21504* #	c 44	NASA-CASE-LAR-12720-1	US-PATENT-APPL-SN-274706
				US-PATENT-CLASS-357-30				US-PATENT-CLASS-250-340					US-PATENT-CLASS-73-147
				US-PATENT-CLASS-427-88				US-PATENT-CLASS-250-350					
				US-PATENT-CLASS-427-89									

N83-21785* #	c 52	US-PATENT-4,372,159 NASA-CASE-LEW-13107-1 US-PATENT-APPL-SN-272407 US-PATENT-CLASS-604-280 US-PATENT-CLASS-604-8 US-PATENT-4,377,169	US-PATENT-CLASS-422-52 US-PATENT-CLASS-435-289 US-PATENT-CLASS-435-291 US-PATENT-CLASS-435-3 US-PATENT-CLASS-435-34 US-PATENT-CLASS-435-38 US-PATENT-CLASS-435-39 US-PATENT-CLASS-435-8 US-PATENT-4,385,113	US-PATENT-CLASS-423-648R US-PATENT-CLASS-423-649 US-PATENT-4,393,039 NASA-CASE-LEW-13132-1 US-PATENT-APPL-SN-272152 US-PATENT-CLASS-204-35N US-PATENT-CLASS-204-37R US-PATENT-CLASS-204-56R US-PATENT-4,392,920				
N83-21849* #	c 74	NASA-CASE-ARC-11354-1 US-PATENT-APPL-SN-282192 US-PATENT-CLASS-356-357 US-PATENT-CLASS-73-147 US-PATENT-4,377,343	N83-27577* #	c 52	NASA-CASE-MSC-18761-1 US-PATENT-APPL-SN-254688 US-PATENT-CLASS-128-DIG.13 US-PATENT-CLASS-604-114 US-PATENT-CLASS-604-151 US-PATENT-CLASS-73-204 US-PATENT-4,384,578	N83-29388* #	c 27	NASA-CASE-LEW-12676-2 US-PATENT-APPL-SN-393583 NASA-CASE-LEW-12508-3 US-PATENT-APPL-SN-235668 US-PATENT-CLASS-62-3 US-PATENT-4,392,356
N83-21993* #	c 76	NASA-CASE-NPO-15904-1 US-PATENT-APPL-SN-465369	N83-27578* #	c 52	NASA-CASE-MSC-18759-1 US-PATENT-APPL-SN-233270 US-PATENT-CLASS-128-660 US-PATENT-CLASS-128-663 US-PATENT-CLASS-73-597 US-PATENT-4,383,533	N83-29392* #	c 27	NASA-CASE-LEW-12676-2 US-PATENT-APPL-SN-393583
N83-24572* #	c 25	NASA-CASE-NPO-16135-1 US-PATENT-APPL-SN-470114	N83-27578* #	c 52	NASA-CASE-MSC-18759-1 US-PATENT-APPL-SN-233270 US-PATENT-CLASS-128-660 US-PATENT-CLASS-128-663 US-PATENT-CLASS-73-597 US-PATENT-4,383,533	N83-29625* #	c 34	NASA-CASE-LEW-12508-3 US-PATENT-APPL-SN-235668 US-PATENT-CLASS-62-3 US-PATENT-4,392,356
N83-24639* #	c 26	NASA-CASE-LEW-13834-1 US-PATENT-APPL-SN-478131	N83-27578* #	c 52	NASA-CASE-MSC-18759-1 US-PATENT-APPL-SN-233270 US-PATENT-CLASS-128-660 US-PATENT-CLASS-128-663 US-PATENT-CLASS-73-597 US-PATENT-4,383,533	N83-29650* #	c 35	NASA-CASE-MFS-25242-1 US-PATENT-APPL-SN-246773 US-PATENT-CLASS-374-17 US-PATENT-CLASS-73-863.11 US-PATENT-4,389,904
N83-24783* #	c 33	NASA-CASE-LAR-12363-2 US-PATENT-APPL-SN-377892 US-PATENT-CLASS-250-388 US-PATENT-4,379,970	N83-27975* #	c 05	NASA-CASE-FRC-11072-1 US-PATENT-APPL-SN-230613 US-PATENT-CASE-179-146-R US-PATENT-CASE-179-179 US-PATENT-CASE-367-906 US-PATENT-4,388,502	N83-29651* #	c 35	NASA-CASE-LAR-12531-1 US-PATENT-APPL-SN-282191 US-PATENT-CASE-368-10 US-PATENT-CASE-368-118 US-PATENT-CASE-368-119 US-PATENT-CASE-368-120 US-PATENT-CASE-368-6 US-PATENT-CASE-368-9 US-PATENT-4,392,749
N83-24828* #	c 35	NASA-CASE-MFS-25509-1 US-PATENT-APPL-SN-297486 US-PATENT-CLASS-156-DIG.62 US-PATENT-CLASS-34-57A US-PATENT-CLASS-432-227 US-PATENT-CLASS-432-58 US-PATENT-4,378,209	N83-28064* #	c 18	NASA-CASE-GSC-12551-1 US-PATENT-APPL-SN-182881 US-PATENT-CLASS-244-169 US-PATENT-CLASS-244-170 US-PATENT-4,386,750	N83-29652* #	c 35	NASA-CASE-MSC-18936-1 US-PATENT-APPL-SN-325082 US-PATENT-CLASS-55-194 US-PATENT-CLASS-55-202 US-PATENT-4,392,874
N83-25217* #	c 45	NASA-CASE-NPO-15220-1 US-PATENT-APPL-SN-246777 US-PATENT-CLASS-220-335 US-PATENT-CLASS-73-863.31 US-PATENT-CLASS-73-863.83 US-PATENT-CLASS-73-864.83 US-PATENT-4,377,949	N83-28078* #	c 23	NASA-CASE-ARC-11425-1 US-PATENT-APPL-SN-493864	N83-29680* #	c 36	NASA-CASE-MFS-25315-1 US-PATENT-APPL-SN-224232 US-PATENT-CASE-356-129 US-PATENT-4,391,518
N83-25346* #	c 52	NASA-CASE-NPO-15197-1 US-PATENT-APPL-SN-263957 US-PATENT-CLASS-128-303B US-PATENT-CLASS-128-774 US-PATENT-CLASS-128-782 US-PATENT-4,378,813	N83-28240* #	c 27	NASA-CASE-LAR-12775-1 US-PATENT-APPL-SN-308201 US-PATENT-CLASS-524-104 US-PATENT-CLASS-524-173 US-PATENT-CLASS-524-233 US-PATENT-CLASS-524-726 US-PATENT-CLASS-525-181 US-PATENT-CLASS-525-183 US-PATENT-CLASS-525-184 US-PATENT-CLASS-525-474 US-PATENT-4,389,504	N83-29681* #	c 36	NASA-CASE-GSC-12609-2 US-PATENT-APPL-SN-481020
N83-25378* #	c 60	NASA-CASE-GSC-12223-1 US-PATENT-APPL-SN-041143 US-PATENT-CLASS-364-200 US-PATENT-4,380,046	N83-28261* #	c 31	NASA-CASE-ARC-11363-1 US-PATENT-APPL-SN-500048	N83-29783* #	c 43	NASA-CASE-LAR-13053-1 US-PATENT-APPL-SN-508372
N83-25789* #	c 24	NASA-CASE-ARC-11261-1 US-PATENT-APPL-SN-282129 US-PATENT-CLASS-423-447.2 US-PATENT-CLASS-423-447.6 US-PATENT-CLASS-423-447.7 US-PATENT-4,385,043	N83-28319* #	c 33	NASA-CASE-MFS-25302-1 US-PATENT-APPL-SN-243683 US-PATENT-CLASS-322-29 US-PATENT-CLASS-322-35 US-PATENT-CLASS-322-47 US-PATENT-CLASS-322-95 US-PATENT-4,388,585	N83-29991* #	c 52	NASA-CASE-ARC-11264-2 US-PATENT-APPL-SN-465370
N83-26078* #	c 37	NASA-CASE-GSC-12643-1 US-PATENT-APPL-SN-238786 US-PATENT-CLASS-417-15 US-PATENT-CLASS-47-26 US-PATENT-4,381,174	N83-28356* #	c 34	NASA-CASE-GSC-12553-1 US-PATENT-APPL-SN-106192 US-PATENT-CLASS-165-185 US-PATENT-CLASS-165-32 US-PATENT-CLASS-165-76 US-PATENT-4,388,965	N83-31743* #	c 25	NASA-CASE-NPO-15304-1 US-PATENT-APPL-SN-315587 US-PATENT-CLASS-201-17 US-PATENT-CLASS-44-15R US-PATENT-4,391,609
N83-27058* #	c 31	NASA-CASE-GSC-12636-1 US-PATENT-APPL-SN-173520 US-PATENT-CLASS-125-20 US-PATENT-CLASS-408-1R US-PATENT-CLASS-408-61 US-PATENT-CLASS-409-131 US-PATENT-4,383,785	N83-28573* #	c 44	NASA-CASE-LAR-12495-1 US-PATENT-APPL-SN-263830 US-PATENT-CLASS-310-11 US-PATENT-4,388,542	N83-31795* #	c 26	NASA-CASE-LEW-13343 US-PATENT-APPL-SN-283418 US-PATENT-CLASS-427-318 US-PATENT-CLASS-427-419.2 US-PATENT-CLASS-428-450 US-PATENT-CLASS-428-469 US-PATENT-CLASS-428-641 US-PATENT-CLASS-428-650 US-PATENT-CLASS-428-680 US-PATENT-4,374,183
N83-27085* #	c 32	NASA-CASE-NPO-15401-1 US-PATENT-APPL-SN-259210 US-PATENT-CLASS-333-22F US-PATENT-CLASS-333-254 US-PATENT-4,382,239	N83-28574* #	c 44	NASA-CASE-GSC-12697-1 US-PATENT-APPL-SN-308204 US-PATENT-CLASS-308-10 US-PATENT-CLASS-310-15 US-PATENT-CLASS-417-417 US-PATENT-CLASS-62-6 US-PATENT-4,389,849	N83-31854* #	c 27	NASA-CASE-ARC-11368-1 US-PATENT-APPL-SN-288267 US-PATENT-CLASS-548-413 US-PATENT-CLASS-548-415 US-PATENT-4,395,557
N83-27126* #	c 33	NASA-CASE-NPO-15358-1 US-PATENT-APPL-SN-219968 US-PATENT-CLASS-323-269 US-PATENT-CLASS-323-303 US-PATENT-CLASS-323-350 US-PATENT-4,382,224	N83-28849* #	c 51	NASA-CASE-ARC-11322-1 US-PATENT-APPL-SN-315278 US-PATENT-CLASS-435-3 US-PATENT-CLASS-435-34 US-PATENT-CLASS-435-38 US-PATENT-CLASS-435-39 US-PATENT-CLASS-435-807 US-PATENT-4,386,157	N83-31855* #	c 27	NASA-CASE-LEW-1335901 US-PATENT-APPL-SN-229233 US-PATENT-CLASS-427-219.2 US-PATENT-CLASS-427-34 US-PATENT-CLASS-427-405 US-PATENT-CLASS-427-423 US-PATENT-CLASS-428-623 US-PATENT-CLASS-428-633 US-PATENT-CLASS-428-678 US-PATENT-4,395,190
N83-27144* #	c 34	NASA-CASE-LEW-13174-1 US-PATENT-APPL-SN-200634 US-PATENT-CLASS-415-115 US-PATENT-CLASS-416-1 US-PATENT-CLASS-416-97R US-PATENT-4,384,823	N83-29032* #	c 74	NASA-CASE-KSC-11104-1 US-PATENT-APPL-SN-153245 US-PATENT-CLASS-350-96.16 US-PATENT-CLASS-455-612 US-PATENT-4,381,881	N83-31895* #	c 31	NASA-CASE-MFS-25134-1 US-PATENT-APPL-SN-195226 US-PATENT-CLASS-24-214 US-PATENT-CLASS-244-159 US-PATENT-4,381,583
N83-27184* #	c 35	NASA-CASE-NPO-15292-1 US-PATENT-APPL-SN-207135 US-PATENT-CLASS-250-282 US-PATENT-CLASS-250-288 US-PATENT-CLASS-250-423 US-PATENT-4,383,171	N83-29303* #	c 18	NASA-CASE-MFS-25403-1 US-PATENT-APPL-SN-248745 US-PATENT-CLASS-244-115 US-PATENT-CLASS-244-161 US-PATENT-CLASS-269-152 US-PATENT-CLASS-269-242 US-PATENT-CLASS-269-244 US-PATENT-CLASS-294-86R US-PATENT-4,391,423	N83-31896* #	c 31	NASA-CASE-NPO-14596-3 US-PATENT-APPL-SN-303671 US-PATENT-CLASS-264-5 US-PATENT-CLASS-264-9 US-PATENT-CLASS-425-6 US-PATENT-CLASS-65-142 US-PATENT-CLASS-65-214 US-PATENT-CLASS-65-22 US-PATENT-4,344,787
N83-27344* #	c 44	NASA-CASE-LEW-13246-1 US-PATENT-APPL-SN-266255 US-PATENT-CLASS-429-105 US-PATENT-CLASS-429-107 US-PATENT-CLASS-429-109 US-PATENT-CLASS-429-34 US-PATENT-CLASS-429-40 US-PATENT-4,382,116	N83-29324* #	c 25	NASA-CASE-GSC-12770-1 US-PATENT-APPL-SN-301075	N83-31897* #	c 31	NASA-CASE-NPO-15251-1
N83-27569* #	c 51	NASA-CASE-GSC-12158-1 US-PATENT-APPL-SN-888434						



N83-31918* #	c 32	US-PATENT-APPL-SN-229239 US-PATENT-CLASS-337-14 US-PATENT-CLASS-62-48 US-PATENT-CLASS-62-514R US-PATENT-4,366,680
N83-31952* #	c 33	NASA-CASE-NPO-14525-2 US-PATENT-APPL-SN-165910 US-PATENT-CLASS-343-5CM US-PATENT-CLASS-343-9PS US-PATENT-CLASS-367-88 US-PATENT-4,355,311
N83-31953* #	c 33	NASA-CASE-LEW-13429-1 US-PATENT-APPL-SN-220212 US-PATENT-CLASS-315-3 US-PATENT-CLASS-315-4 US-PATENT-CLASS-315-5 US-PATENT-CLASS-315-5.35 US-PATENT-CLASS-315-5.38 US-PATENT-4,395,656
N83-31954* #	c 33	NASA-CASE-MFS-25215-1 US-PATENT-APPL-SN-291131 US-PATENT-CLASS-318-800 US-PATENT-CLASS-318-803 US-PATENT-CLASS-318-809 US-PATENT-4,394,610
N83-31993* #	c 34	NASA-CASE-NPO-14940-1 US-PATENT-APPL-SN-135038 US-PATENT-CLASS-324-466 US-PATENT-CLASS-73-861.05 US-PATENT-4,338,568
N83-32026* #	c 35	NASA-CASE-NPO-15400-1 US-PATENT-APPL-SN-246774 US-PATENT-CLASS-250-573 US-PATENT-CLASS-73-64.4 US-PATENT-4,391,129
N83-32067* #	c 37	NASA-CASE-LAR-12728-1 US-PATENT-APPL-SN-408575 US-PATENT-CLASS-248-636 US-PATENT-CLASS-248-638 US-PATENT-CLASS-62-295 US-PATENT-CLASS-62-514 R US-PATENT-4,394,819
N83-32081* #	c 39	NASA-CASE-GSC-12517-1 US-PATENT-APPL-SN-214361 US-PATENT-CLASS-104-282 US-PATENT-CLASS-104-290 US-PATENT-CLASS-308-10 US-PATENT-CLASS-310-12 US-PATENT-4,387,935
N83-32175* #	c 44	NASA-CASE-LAR-12602-1 US-PATENT-APPL-SN-210506 US-PATENT-CLASS-374-51 US-PATENT-CLASS-73-818 US-PATENT-CLASS-73-822 US-PATENT-CLASS-73-856 US-PATENT-CLASS-73-860 US-PATENT-4,393,716
N83-32176* #	c 44	NASA-CASE-LEW-12443-1 US-PATENT-APPL-SN-235797 US-PATENT-CLASS-310-306 US-PATENT-4,373,142
N83-32177* #	c 44	NASA-CASE-LEW-13171-2 US-PATENT-APPL-SN-333537 US-PATENT-CLASS-29-623.5 US-PATENT-CLASS-429-144 US-PATENT-CLASS-429-251 US-PATENT-CLASS-429-254 US-PATENT-4,371,596
N83-32232* #	c 47	NASA-CASE-LEW-13401-2 US-PATENT-APPL-SN-359388 US-PATENT-CLASS-136-249 US-PATENT-CLASS-357-30 US-PATENT-4,376,872
N83-32242* #	c 47	NASA-CASE-NPO-14936-1 US-PATENT-APPL-SN-163837 US-PATENT-CLASS-250-203R US-PATENT-CLASS-356-222 US-PATENT-4,355,896
N83-32342* #	c 60	NASA-CASE-NPO-15342-1 US-PATENT-APPL-SN-258623 US-PATENT-CLASS-364-200 US-PATENT-CLASS-364-900 US-PATENT-4,394,726
N83-32515* #	c 71	NASA-CASE-NPO-15453-1 US-PATENT-APPL-SN-314929 US-PATENT-CLASS-60-721 US-PATENT-CLASS-73-505 US-PATENT-4,393,708
N83-32516* #	c 71	NASA-CASE-NPO-15522-1 US-PATENT-APPL-SN-303672 US-PATENT-CLASS-60-721 US-PATENT-CLASS-73-505 US-PATENT-4,393,706
N83-32577* #	c 74	NASA-CASE-GSC-12614-1 US-PATENT-APPL-SN-195227 US-PATENT-CLASS-356-353
N83-33882* #	c 06	US-PATENT-CLASS-356-363 US-PATENT-4,395,123
N83-33884* #	c 07	NASA-CASE-FRC-11043-1 US-PATENT-APPL-SN-242790 US-PATENT-CLASS-33-322 US-PATENT-CLASS-74-5.34 US-PATENT-4,387,513
N83-33950* #	c 24	NASA-CASE-ARC-10812-1 US-PATENT-APPL-SN-657903 US-PATENT-CLASS-181-213 US-PATENT-CLASS-239-265.17 US-PATENT-CLASS-60-262 US-PATENT-CLASS-60-269 US-PATENT-CLASS-60-271 US-PATENT-4,372,110
N83-33977* #	c 25	NASA-CASE-NPO-14987-1 US-PATENT-APPL-SN-164-584 US-PATENT-CLASS-427-215 US-PATENT-CLASS-427-241 US-PATENT-CLASS-428-367 US-PATENT-CLASS-428-375 US-PATENT-CLASS-428-392 US-PATENT-CLASS-428-902 US-PATENT-CLASS-428-903 US-PATENT-4,359,503
N83-34039* #	c 27	NASA-CASE-ARC-11326-1 US-PATENT-APPL-SN-178192 US-PATENT-CLASS-252-5 US-PATENT-CLASS-423-419P US-PATENT-CLASS-423-600 US-PATENT-CLASS-424-156 US-PATENT-4,356,157
N83-34040* #	c 27	NASA-CASE-GSC-12686-1 US-PATENT-APPL-SN-293412 US-PATENT-CLASS-427-322 US-PATENT-CLASS-427-340 US-PATENT-CLASS-427-352 US-PATENT-CLASS-427-400 US-PATENT-CLASS-427-407.1 US-PATENT-4,362,769
N83-34041* #	c 27	NASA-CASE-LAR-12838-1 US-PATENT-APPL-SN-320621 US-PATENT-CLASS-526-259 US-PATENT-CLASS-526-285 US-PATENT-CLASS-528-12 US-PATENT-CLASS-528-125 US-PATENT-CLASS-528-126 US-PATENT-CLASS-528-128 US-PATENT-CLASS-528-220 US-PATENT-CLASS-528-222 US-PATENT-CLASS-528-228 US-PATENT-CLASS-528-229 US-PATENT-CLASS-528-38 US-PATENT-4,375,536
N83-34043* #	c 27	NASA-CASE-LAR-12858-1 US-PATENT-APPL-SN-407240 US-PATENT-CLASS-164-331.12 US-PATENT-CLASS-264-137 US-PATENT-CLASS-264-258 US-PATENT-CLASS-264-331.46 US-PATENT-CLASS-528-222 US-PATENT-CLASS-528-226 US-PATENT-4,398,021
N83-34073* #	c 31	NASA-CASE-NPO-15202-1 US-PATENT-APPL-SN-233271 US-PATENT-CLASS-384-124 US-PATENT-CLASS-523-440 US-PATENT-CLASS-523-443 US-PATENT-4,395,503
N83-34189* #	c 33	NASA-CASE-ARC-11246-1 US-PATENT-APPL-SN-136660 US-PATENT-CLASS-156-264 US-PATENT-CLASS-156-344 US-PATENT-CLASS-156-59 US-PATENT-CLASS-273-240 US-PATENT-CLASS-434-403 US-PATENT-CLASS-434-88 US-PATENT-4,385,949
N83-34190* #	c 33	NASA-CASE-GSC-12566-1 US-PATENT-APPL-SN-276748 US-PATENT-CLASS-315-208 US-PATENT-CLASS-315-224 US-PATENT-CLASS-315-225 US-PATENT-CLASS-315-237 US-PATENT-CLASS-315-241R US-PATENT-CLASS-372-25 US-PATENT-4,398,129
N83-34221* #	c 34	NASA-CASE-MFS-25807-1 US-PATENT-APPL-SN-325886 US-PATENT-CLASS-361-90 US-PATENT-CLASS-318-729 US-PATENT-CLASS-318-798 US-PATENT-CLASS-318-806 US-PATENT-CLASS-361-100 US-PATENT-CLASS-363-54 US-PATENT-4,400,657
N83-34272* #	c 35	NASA-CASE-ARC-11317-1 US-PATENT-APPL-SN-229231 US-PATENT-CLASS-340-518 US-PATENT-CLASS-340-566 US-PATENT-4,374,378
N83-34304* #	c 36	NASA-CASE-ARC-11312-1 US-PATENT-APPL-SN-234224 US-PATENT-CLASS-356-1 US-PATENT-CLASS-356-4 US-PATENT-CLASS-358-104 US-PATENT-CLASS-358-109 US-PATENT-CLASS-434-38 US-PATENT-CLASS-434-34 US-PATENT-4,391,514
N83-34323* #	c 37	NASA-CASE-GSC-12726-1 US-PATENT-APPL-SN-364093 US-PATENT-CLASS-308-10 US-PATENT-4,381,375
N83-34448* #	c 44	NASA-CASE-ARC-11164-1 US-PATENT-APPL-SN-308007 US-PATENT-CLASS-350-166 US-PATENT-CLASS-428-312.6 US-PATENT-CLASS-428-325 US-PATENT-CLASS-428-427 US-PATENT-CLASS-428-428 US-PATENT-4,381,333
N83-34449* #	c 44	NASA-CASE-LAR-12719-1 US-PATENT-APPL-SN-367134 US-PATENT-CLASS-126-901 US-PATENT-CLASS-204-33 US-PATENT-CLASS-204-35N US-PATENT-4,397,716
N83-34796* #	c 76	NASA-CASE-LEW-12582-1 US-PATENT-APPL-SN-397281 US-PATENT-CLASS-310-332 US-PATENT-CLASS-310-800 US-PATENT-CLASS-428-294 US-PATENT-CLASS-428-421 US-PATENT-CLASS-428-422 US-PATENT-4,400,642
N83-35176* #	c 31	NASA-CASE-NPO-15070-1 US-PATENT-APPL-SN-403847 US-PATENT-CLASS-264-12 US-PATENT-CLASS-264-24 US-PATENT-CLASS-264-5 US-PATENT-CLASS-425-10 US-PATENT-CLASS-425-6 US-PATENT-CLASS-425-7 US-PATENT-CLASS-65-142 US-PATENT-CLASS-65-21.3 US-PATENT-CLASS-65-21.4 US-PATENT-CLASS-65-22 US-PATENT-4,400,191
N83-35177* #	c 31	NASA-CASE-LEW-13450-1 US-PATENT-APPL-SN-328760 US-PATENT-CLASS-427-243 US-PATENT-CLASS-427-247 US-PATENT-CLASS-427-34 US-PATENT-CLASS-427-423 US-PATENT-4,402,992
N83-35227* #	c 33	NASA-CASE-MFS-25209-1 US-PATENT-APPL-SN-291132 US-PATENT-CLASS-318-685 US-PATENT-CLASS-318-798 US-PATENT-CLASS-318-806 US-PATENT-4,401,934
N83-35307* #	c 34	NASA-CASE-GSC-12812-1 US-PATENT-APPL-SN-434674 US-PATENT-CLASS-165-104.26 US-PATENT-CLASS-165-32 US-PATENT-4,402,358
N83-35338* #	c 35	NASA-CASE-LEW-13934-1 US-PATENT-APPL-SN-212949 US-PATENT-CLASS-228-103 US-PATENT-CLASS-228-193 US-PATENT-CLASS-228-263.18 US-PATENT-CLASS-415-118 US-PATENT-4,402,447
N83-35350* #	c 36	NASA-CASE-NPO-15201-1 US-PATENT-APPL-SN-246778 US-PATENT-CLASS-330-4

		US-PATENT-CLASS-332-7.5				US-PATENT-4,412,664				US-PATENT-CLASS-324-250
		US-PATENT-CLASS-333-24.2				NASA-CASE-ARC-11418-1				US-PATENT-CLASS-328-230
		US-PATENT-4,399,415				US-PATENT-APPL-SN-452464				US-PATENT-CLASS-372-74
N83-35781* #	c 71	NASA-CASE-NPO-15334-1	N84-11213* #	c 24	NASA-CASE-ARC-11418-1	US-PATENT-CLASS-523-435	N84-12445* #	c 35	NASA-CASE-LAR-12882-1	US-PATENT-4,414,509
		US-PATENT-APPL-SN-341406			US-PATENT-CLASS-523-435	US-PATENT-CLASS-523-456			US-PATENT-APPL-SN-267179	US-PATENT-CLASS-364-415
		US-PATENT-CLASS-210-748			US-PATENT-CLASS-528-110	US-PATENT-CLASS-528-361			US-PATENT-CLASS-73-646	US-PATENT-CLASS-73-658
		US-PATENT-CLASS-252-381			US-PATENT-4,410,682				US-PATENT-4,413,522	
		US-PATENT-CLASS-366-114	N84-11214* #	c 24	NASA-CASE-LAR-12807-1	US-PATENT-APPL-SN-280155	N84-12491* #	c 37	NASA-CASE-GSC-12619-1	US-PATENT-APPL-SN-225499
		US-PATENT-CLASS-55-15			US-PATENT-CLASS-228-181	US-PATENT-CLASS-228-212			US-PATENT-CLASS-101-407BP	US-PATENT-CLASS-289-3
		US-PATENT-CLASS-55-277			US-PATENT-CLASS-228-212	US-PATENT-CLASS-244-119			US-PATENT-4,393,777	
		US-PATENT-CLASS-55-38			US-PATENT-CLASS-244-123	US-PATENT-CLASS-428-593	N84-12492* #	c 37	NASA-CASE-GSC-12622-1	US-PATENT-APPL-SN-243884
		US-PATENT-CLASS-55-52			US-PATENT-CLASS-52-808	US-PATENT-CLASS-52-808			US-PATENT-CLASS-308-2A	US-PATENT-4,405,184
		US-PATENT-CLASS-65-134			US-PATENT-4,411,380		N84-12493* #	c 37	NASA-CASE-LAR-12923-1	US-PATENT-APPL-SN-383063
		US-PATENT-4,398,925			NASA-CASE-MFS-25678-1	US-PATENT-APPL-SN-378533			US-PATENT-CLASS-416-117	US-PATENT-CLASS-416-132B
N83-35888* #	c 76	NASA-CASE-NPO-15530-1	N84-11497* #	c 37	US-PATENT-APPL-SN-378533	US-PATENT-CLASS-277-116.6			US-PATENT-4,415,311	
		US-PATENT-APPL-SN-364092			US-PATENT-CLASS-277-124	US-PATENT-CLASS-277-164	N84-12654* #	c 45	NASA-CASE-NTSL-10	US-PATENT-APPL-SN-335036
		US-PATENT-CLASS-156-DIG.6			US-PATENT-CLASS-277-177	US-PATENT-CLASS-277-190			US-PATENT-CLASS-210-151	US-PATENT-CLASS-210-152
		US-PATENT-CLASS-156-DIG.73			US-PATENT-4,410,189				US-PATENT-CLASS-210-601	US-PATENT-CLASS-210-605
		US-PATENT-CLASS-156-608			NASA-CASE-MFS-25740-1	US-PATENT-APPL-SN-371352			US-PATENT-CLASS-210-617	US-PATENT-CLASS-47-58
		US-PATENT-4,401,505			US-PATENT-CLASS-128-DIG.25	US-PATENT-CLASS-128-1R			US-PATENT-4,415,450	
N83-35992* #	c 01	NASA-CASE-LAR-12624-1			US-PATENT-CLASS-128-346	US-PATENT-4,408,597	N84-12968* #	c 76	NASA-CASE-NPO-15811-1	US-PATENT-APPL-SN-547175
		US-PATENT-APPL-SN-259209			US-PATENT-4,408,597	NASA-CASE-MSC-18223-2			US-PATENT-APPL-SN-12638-1	US-PATENT-APPL-SN-367187
		US-PATENT-CLASS-102-378			US-PATENT-APPL-SN-210681	US-PATENT-APPL-SN-368187	N84-14132* #	c 04	US-PATENT-CLASS-33-DIG.3	US-PATENT-CLASS-33-348
		US-PATENT-CLASS-244-137P			US-PATENT-CLASS-604-368	US-PATENT-CLASS-604-378			US-PATENT-CLASS-33-356	US-PATENT-CLASS-33-361
		US-PATENT-CLASS-89-18			US-PATENT-CLASS-604-396	US-PATENT-4,338,371			US-PATENT-4,418,480	
		US-PATENT-4,407,468			US-PATENT-4,411,680		N84-14322* #	c 27	NASA-CASE-ARC-11400-1	US-PATENT-APPL-SN-441899
N83-36029* #	c 07	NASA-CASE-LEW-13142-1			US-PATENT-APPL-SN-267178	US-PATENT-CLASS-250-363R			US-PATENT-CLASS-428-246	US-PATENT-CLASS-428-260
		US-PATENT-APPL-SN-132364			US-PATENT-CLASS-250-363S	US-PATENT-CLASS-250-368			US-PATENT-CLASS-428-367	US-PATENT-CLASS-428-408
		US-PATENT-CLASS-60-39.07			US-PATENT-CLASS-378-2	US-PATENT-4,404,469			US-PATENT-CLASS-428-473.5	US-PATENT-CLASS-428-902
		US-PATENT-4,404,793			NASA-CASE-GSC-12640-1	US-PATENT-APPL-SN-267178			US-PATENT-CLASS-428-920	US-PATENT-CLASS-524-494
N83-36118* #	c 25	NASA-CASE-ARC-11252-1			US-PATENT-CLASS-250-363S	US-PATENT-CLASS-250-368			US-PATENT-CLASS-524-496	US-PATENT-CLASS-524-500
		US-PATENT-APPL-SN-317977			US-PATENT-CLASS-378-2	US-PATENT-4,404,469			US-PATENT-CLASS-524-530	US-PATENT-CLASS-525-282
		US-PATENT-CLASS-169-47			NASA-CASE-GSC-12640-1	US-PATENT-APPL-SN-267178			US-PATENT-CLASS-525-282	US-PATENT-4,421,820
		US-PATENT-CLASS-252-2			US-PATENT-CLASS-250-363R	US-PATENT-CLASS-250-363S	N84-14323* #	c 27	NASA-CASE-LAR-12881-1	US-PATENT-APPL-SN-361215
		US-PATENT-CLASS-252-5			US-PATENT-CLASS-250-363S	US-PATENT-CLASS-250-368			US-PATENT-CLASS-206-447	US-PATENT-CLASS-206-582
		US-PATENT-4,406,797			US-PATENT-CLASS-378-2	US-PATENT-4,404,469			US-PATENT-CLASS-428-202	US-PATENT-CLASS-428-347
N83-36220* #	c 27	NASA-CASE-MFS-25436-1			NASA-CASE-NPO-15375-1	US-PATENT-APPL-SN-210405			US-PATENT-CLASS-428-40	US-PATENT-CLASS-428-78
		US-PATENT-APPL-SN-280151			US-PATENT-CLASS-250-227	US-PATENT-CLASS-30-1.1			US-PATENT-4,420,518	
		US-PATENT-CLASS-156-DIG.73			US-PATENT-CLASS-350-96.10	US-PATENT-CLASS-350-96.15			NASA-CASE-MSC-18382-2	US-PATENT-APPL-SN-241155
		US-PATENT-CLASS-156-DIG.89			US-PATENT-CLASS-73-432T	US-PATENT-4,405,197			US-PATENT-CLASS-524-371	US-PATENT-4,395,511
		US-PATENT-CLASS-156-600			US-PATENT-4,405,197				NASA-CASE-GSC-12650-1	US-PATENT-APPL-SN-301077
		US-PATENT-CLASS-156-610			NASA-CASE-LAR-13255-1	US-PATENT-APPL-SN-550881			US-PATENT-CLASS-330-107	US-PATENT-CLASS-330-109
		US-PATENT-CLASS-165-2			US-PATENT-APPL-SN-12615-1	US-PATENT-APPL-SN-263829			US-PATENT-4,417,215	
		US-PATENT-CLASS-165-58			US-PATENT-CLASS-244-13	US-PATENT-CLASS-244-45R			NASA-CASE-LEW-13286-1	US-PATENT-APPL-SN-272406
		US-PATENT-CLASS-219-343			US-PATENT-CLASS-244-53R	US-PATENT-CLASS-244-55			US-PATENT-CLASS-252-182.1	US-PATENT-CLASS-429-206
		US-PATENT-CLASS-219-354			US-PATENT-CLASS-244-55	US-PATENT-CLASS-244-91			US-PATENT-CLASS-429-229	US-PATENT-4,418,130
		US-PATENT-CLASS-219-390			US-PATENT-4,415,133		N84-14421* #	c 33	NASA-CASE-MFS-25211-2	US-PATENT-APPL-SN-432057
		US-PATENT-CLASS-219-411			NASA-CASE-ARC-11426-1	US-PATENT-APPL-SN-526741			US-PATENT-CLASS-339-258RR	US-PATENT-CLASS-339-262RR
		US-PATENT-CLASS-350-316			US-PATENT-APPL-SN-550881	US-PATENT-CLASS-204-DIG.3			US-PATENT-CLASS-339-64M	
		US-PATENT-4,408,858			US-PATENT-CLASS-204-129	US-PATENT-CLASS-204-242				
N83-36355* #	c 33	NASA-CASE-GSC-12630-1			US-PATENT-CLASS-204-278	US-PATENT-CLASS-204-290R				
		US-PATENT-APPL-SN-308009			US-PATENT-CLASS-427-443.2	US-PATENT-CLASS-429-111				
		US-PATENT-CLASS-343-100AP			US-PATENT-4,414,080		N84-14422* #	c 33	NASA-CASE-LEW-13286-1	US-PATENT-APPL-SN-272406
		US-PATENT-CLASS-343-840			NASA-CASE-NPO-15458-1	US-PATENT-APPL-SN-376306			US-PATENT-CLASS-252-182.1	US-PATENT-CLASS-429-206
		US-PATENT-4,407,001			US-PATENT-APPL-SN-376306	US-PATENT-CLASS-204-129			US-PATENT-CLASS-429-229	US-PATENT-4,418,130
N83-36356* #	c 33	NASA-CASE-KSC-11170-1			US-PATENT-CLASS-204-242	US-PATENT-CLASS-204-278				
		US-PATENT-APPL-SN-284288			US-PATENT-CLASS-204-290R	US-PATENT-CLASS-427-443.2				
		US-PATENT-CLASS-330-110			US-PATENT-CLASS-429-111					
		US-PATENT-CLASS-330-282			US-PATENT-4,414,080		N84-14423* #	c 33	NASA-CASE-MFS-25211-2	US-PATENT-APPL-SN-432057
		US-PATENT-4,406,989			NASA-CASE-LAR-12615-1	US-PATENT-APPL-SN-263829			US-PATENT-CLASS-339-258RR	US-PATENT-CLASS-339-262RR
N83-36357* #	c 33	NASA-CASE-LAR-12654-1			US-PATENT-APPL-SN-263829	US-PATENT-CLASS-244-13			US-PATENT-CLASS-339-64M	
		US-PATENT-APPL-SN-234225			US-PATENT-CLASS-244-45R	US-PATENT-CLASS-244-53R				
		US-PATENT-CLASS-368-184			US-PATENT-CLASS-244-55	US-PATENT-CLASS-244-91				
		US-PATENT-CLASS-368-200			US-PATENT-4,415,133					
		US-PATENT-CLASS-368-201			NASA-CASE-ARC-11426-1	US-PATENT-APPL-SN-526741				
		US-PATENT-4,407,589			US-PATENT-CLASS-204-DIG.3	US-PATENT-CLASS-204-129				
N83-36482* #	c 37	NASA-CASE-MSC-18791-1			US-PATENT-CLASS-204-242	US-PATENT-CLASS-204-278				
		US-PATENT-APPL-SN-246746			US-PATENT-CLASS-204-290R	US-PATENT-CLASS-427-443.2				
		US-PATENT-CLASS-29-446			US-PATENT-CLASS-429-111					
		US-PATENT-CLASS-73-862.54			US-PATENT-4,414,080		N84-14324* #	c 27	NASA-CASE-MSC-18382-2	US-PATENT-APPL-SN-241155
		US-PATENT-CLASS-81-57.38			NASA-CASE-NPO-15458-1	US-PATENT-APPL-SN-376306			US-PATENT-CLASS-524-371	US-PATENT-4,395,511
		US-PATENT-4,407,165			US-PATENT-APPL-SN-376306	US-PATENT-CLASS-204-DIG.3			NASA-CASE-GSC-12650-1	US-PATENT-APPL-SN-301077
N83-36483* #	c 37	NASA-CASE-MSC-18807-1			US-PATENT-CLASS-204-129	US-PATENT-CLASS-204-242			US-PATENT-CLASS-330-107	US-PATENT-CLASS-330-109
		US-PATENT-APPL-SN-266688			US-PATENT-CLASS-204-278	US-PATENT-CLASS-204-290R			US-PATENT-4,417,215	
		US-PATENT-CLASS-123-197R			US-PATENT-CLASS-427-443.2	US-PATENT-CLASS-429-111			NASA-CASE-LEW-13286-1	US-PATENT-APPL-SN-272406
		US-PATENT-CLASS-123-78E			US-PATENT-4,414,080				US-PATENT-CLASS-252-182.1	US-PATENT-CLASS-429-206
		US-PATENT-4,406,256			NASA-CASE-MFS-25631-1	US-PATENT-APPL-SN-308203			US-PATENT-CLASS-429-229	US-PATENT-4,418,130
N83-36484* #	c 37	NASA-CASE-NPO-15482-1			US-PATENT-CLASS-239-426	US-PATENT-4,413,784				
		US-PATENT-APPL-SN-526739			US-PATENT-4,413,784		N84-14424* #	c 33	NASA-CASE-MFS-25211-2	US-PATENT-APPL-SN-432057
N83-36846* #	c 71	NASA-CASE-NPO-15435-1			NASA-CASE-FRC-11068-1	US-PATENT-APPL-SN-322314			US-PATENT-CLASS-339-258RR	US-PATENT-CLASS-339-262RR
		US-PATENT-APPL-SN-272837			US-PATENT-CLASS-156-215	US-PATENT-CLASS-156-230			US-PATENT-CLASS-339-64M	
		US-PATENT-CLASS-308-10			US-PATENT-CLASS-156-235	US-PATENT-CLASS-156-294				
		US-PATENT-CLASS-73-505			US-PATENT-CLASS-156-391	US-PATENT-CLASS-156-423				
		US-PATENT-4,402,221			US-PATENT-CLASS-156-540	US-PATENT-CLASS-156-71				
N83-36898* #	c 74	NASA-CASE-GSC-12683-1			US-PATENT-CLASS-338-2	US-PATENT-4,407,686				
		US-PATENT-APPL-SN-333535			US-PATENT-CLASS-416-223R		N84-14444* #	c 35	NASA-CASE-LAR-12706-1	US-PATENT-APPL-SN-210498
		US-PATENT-CLASS-350-173			US-PATENT-CLASS-416-242					
		US-PATENT-CLASS-350-445								
		US-PATENT-4,407,563								
N84-11136* #	c 02	NASA-CASE-LAR-12843-1								
		US-PATENT-APPL-SN-392096								
		US-PATENT-CLASS-244-35A								
		US-PATENT-CLASS-244-35R								
		US-PATENT-CLASS-416-223R								
		US-PATENT-CLASS-416-242								

			US-PATENT-APPL-SN-434672	N84-16456* #	c 33	NASA-CASE-NPO-15161-1		US-PATENT-APPL-SN-580397	
			US-PATENT-CLASS-165-32			US-PATENT-APPL-SN-325083	N84-22546* #	c 04	NASA-CASE-GSC-12508-1
			US-PATENT-CLASS-165-41			US-PATENT-CLASS-427-216			US-PATENT-APPL-SN-266253
			US-PATENT-CLASS-165-96			US-PATENT-CLASS-427-217			US-PATENT-CLASS-343-356
			US-PATENT-4,420,035			US-PATENT-CLASS-427-226			US-PATENT-CLASS-343-357
N84-14491* #	c 35		NASA-CASE-LAR-12686-1			US-PATENT-CLASS-427-376.6			US-PATENT-4,445,118
			US-PATENT-APPL-SN-249304			US-PATENT-CLASS-427-376.7	N84-22551* #	c 05	NASA-CASE-LAR-12541-1
			US-PATENT-CLASS-364-557			US-PATENT-CLASS-427-436			US-PATENT-APPL-SN-315588
			US-PATENT-CLASS-364-558			US-PATENT-CLASS-427-437			US-PATENT-CLASS-244-212
			US-PATENT-CLASS-364-571			US-PATENT-CLASS-427-58			US-PATENT-CLASS-244-215
			US-PATENT-CLASS-73-714			US-PATENT-CLASS-427-75			US-PATENT-CLASS-244-216
			US-PATENT-4,399,515			US-PATENT-CLASS-427-88			US-PATENT-CLASS-244-219
N84-14509* #	c 36		NASA-CASE-GSC-12565-1			US-PATENT-CLASS-427-96			US-PATENT-4,444,368
			US-PATENT-APPL-SN-270763			US-PATENT-4,388,346	N84-22559* #	c 07	NASA-CASE-LEW-13622-1
			US-PATENT-CLASS-350-299	N84-16523* #	c 35	NASA-CASE-LAR-12007-3			US-PATENT-APPL-SN-350473
			US-PATENT-CLASS-356-345			US-PATENT-APPL-SN-352831			US-PATENT-CLASS-364-558
			US-PATENT-CLASS-372-100			US-PATENT-CLASS-33-293			US-PATENT-CLASS-73-115
			US-PATENT-CLASS-372-108			US-PATENT-4,428,122			US-PATENT-4,428,226
			US-PATENT-CLASS-372-93	N84-16542* #	c 36	NASA-CASE-LAR-12870-1	N84-22560* #	c 07	NASA-CASE-LEW-13654-1
			US-PATENT-CLASS-372-94			US-PATENT-APPL-SN-317658			US-PATENT-APPL-SN-245571
			US-PATENT-CLASS-372-98			US-PATENT-CLASS-372-55			US-PATENT-CLASS-416-224
			US-PATENT-4,420,836			US-PATENT-CLASS-372-79			US-PATENT-CLASS-416-233
N84-14583* #	c 44		NASA-CASE-NPO-15100-1			US-PATENT-4,424,592			US-PATENT-CLASS-416-92
			US-PATENT-APPL-SN-259211	N84-16560* #	c 37	NASA-CASE-MFS-25510-1			US-PATENT-CLASS-416-97R
			US-PATENT-CLASS-138-42			US-PATENT-APPL-SN-293414			US-PATENT-4,411,597
			US-PATENT-CLASS-251-127			US-PATENT-CLASS-248-228	N84-22601* #	c 16	NASA-CASE-MSC-20254-1
			US-PATENT-4,418,722			US-PATENT-4,422,609			US-PATENT-APPL-SN-418137
N84-14873* #	c 71		NASA-CASE-LAR-11903-2	N84-16561* #	c 37	NASA-CASE-LAR-12785-1			US-PATENT-CLASS-244-158A
			US-PATENT-APPL-SN-238791			US-PATENT-APPL-SN-297488			US-PATENT-CLASS-52-404
			US-PATENT-APPL-SN-753971			US-PATENT-CLASS-239-568			US-PATENT-CLASS-52-506
			US-PATENT-CLASS-239-265.17			US-PATENT-CLASS-241-95			US-PATENT-4,439,968
			US-PATENT-4,398,667			US-PATENT-CLASS-406-155	N84-22605* #	c 18	NASA-CASE-MSC-18969-1
N84-16221* #	c 09		NASA-CASE-ARC-11504-1			US-PATENT-4,428,703			US-PATENT-APPL-SN-368189
			US-PATENT-APPL-SN-565481	N84-16803* #	c 54	NASA-CASE-MSC-20202-1			US-PATENT-CLASS-244-161
N84-16231* #	c 15		NASA-CASE-LAR-12751-1			US-PATENT-APPL-SN-414106			US-PATENT-CLASS-403-322
			US-PATENT-APPL-SN-338386			US-PATENT-CLASS-128-1A			US-PATENT-4,431,333
			US-PATENT-CLASS-73-167			US-PATENT-CLASS-128-15R	N84-22609* #	c 18	NASA-CASE-MFS-15429-1
			US-PATENT-CLASS-73-432R			US-PATENT-CLASS-128-38			US-PATENT-APPL-SN-596959
			US-PATENT-CLASS-73-9			US-PATENT-4,421,109	N84-22610* #	c 18	NASA-CASE-MSC-20543-1
			US-PATENT-4,425,785	N84-16940* #	c 71	NASA-CASE-NPO-15592-1			US-PATENT-APPL-SN-580574
N84-16255* #	c 23		NASA-CASE-NPO-15767-1			US-PATENT-APPL-SN-314702	N84-22612* #	c 18	NASA-CASE-ARC-11505-1
			US-PATENT-APPL-SN-315584			US-PATENT-CLASS-118-300			US-PATENT-APPL-SN-588036
			US-PATENT-CLASS-208-10			US-PATENT-CLASS-118-50	N84-22695* #	c 24	NASA-CASE-LEW-13837-1
			US-PATENT-CLASS-208-8LE			US-PATENT-CLASS-118-50.1			US-PATENT-APPL-SN-495381
			US-PATENT-4,388,171			US-PATENT-CLASS-118-500			US-PATENT-CLASS-204-192C
N84-16259* #	c 23		NASA-CASE-ARC-11511-1			US-PATENT-CLASS-118-57			US-PATENT-CLASS-204-192R
			US-PATENT-APPL-SN-565482			US-PATENT-CLASS-118-62			US-PATENT-CLASS-204-192SP
N84-16262* #	c 24		NASA-CASE-MSC-16934-3			US-PATENT-CLASS-427-346			US-PATENT-CLASS-423-DIG.10
			US-PATENT-APPL-SN-185868			US-PATENT-CLASS-427-421			US-PATENT-CLASS-423-414
			US-PATENT-APPL-SN-361711			US-PATENT-CLASS-427-426			US-PATENT-CLASS-423-445
			US-PATENT-APPL-SN-969757			US-PATENT-CLASS-427-57			US-PATENT-CLASS-423-446
			US-PATENT-CLASS-164-119			US-PATENT-CLASS-427-6			US-PATENT-CLASS-423-449
			US-PATENT-CLASS-264-118			US-PATENT-CLASS-65-213			US-PATENT-4,437,962
			US-PATENT-CLASS-264-59	N84-16959* #	c 72	NASA-CASE-NPO-15547-1	N84-22709* #	c 25	NASA-CASE-NPO-15210-1
			US-PATENT-CLASS-264-60			US-PATENT-APPL-SN-276076			US-PATENT-APPL-SN-322312
			US-PATENT-4,421,700	N84-16986* #	c 74	NASA-CASE-MFS-26000-1			US-PATENT-CLASS-208-10
N84-16276* #	c 25		NASA-CASE-LEW-13426-1			US-PATENT-APPL-SN-571615			US-PATENT-CLASS-208-8LE
			US-PATENT-APPL-SN-393588			US-PATENT-APPL-SN-196877			US-PATENT-4,443,321
			US-PATENT-CLASS-110-186	N84-17555* #	c 35	NASA-CASE-NPO-15426-1	N84-22734* #	c 26	NASA-CASE-LEW-13349-1
			US-PATENT-CLASS-110-262			US-PATENT-APPL-SN-196877			US-PATENT-APPL-SN-350476
			US-PATENT-CLASS-110-263			US-PATENT-CLASS-210-748			US-PATENT-CLASS-29-623.5
			US-PATENT-CLASS-110-265			US-PATENT-CLASS-422-121			US-PATENT-CLASS-427-115
			US-PATENT-CLASS-431-1			US-PATENT-CLASS-422-169			US-PATENT-CLASS-427-125
			US-PATENT-4,425,854			US-PATENT-CLASS-422-178			US-PATENT-CLASS-427-126.6
N84-16340* #	c 27		NASA-CASE-ARC-11421-1			US-PATENT-CLASS-422-186			US-PATENT-CLASS-427-296
			US-PATENT-APPL-SN-561702			US-PATENT-CLASS-55-DIG.25			US-PATENT-CLASS-427-306
N84-16341* #	c 27		NASA-CASE-ARC-11429-1-CU			US-PATENT-CLASS-55-DIG.30			US-PATENT-CLASS-429-223
			US-PATENT-APPL-SN-553339			US-PATENT-CLASS-55-105			US-PATENT-CLASS-429-234
N84-16452* #	c 33		NASA-CASE-LEW-13570-1			US-PATENT-CLASS-55-12			US-PATENT-4,439,465
			US-PATENT-APPL-SN-251009			US-PATENT-CLASS-55-126	N84-22744* #	c 27	NASA-CASE-ARC-11402-1
			US-PATENT-CLASS-315-3.5			US-PATENT-CLASS-55-131			US-PATENT-APPL-SN-366025
			US-PATENT-CLASS-315-3.6			US-PATENT-CLASS-55-138			US-PATENT-CLASS-260-465.5R
			US-PATENT-CLASS-315-39.3			US-PATENT-CLASS-55-139			US-PATENT-CLASS-260-465.6
			US-PATENT-CLASS-333-162			US-PATENT-CLASS-55-145			US-PATENT-CLASS-528-362
			US-PATENT-4,422,012			US-PATENT-CLASS-55-2			US-PATENT-CLASS-528-401
N84-16453* #	c 33		NASA-CASE-MFS-25430-1			US-PATENT-CLASS-55-270			US-PATENT-CLASS-528-422
			US-PATENT-APPL-SN-383083			US-PATENT-CLASS-55-283			US-PATENT-CLASS-528-423
			US-PATENT-CLASS-363-25			US-PATENT-CLASS-55-291			US-PATENT-CLASS-544-215
			US-PATENT-CLASS-363-65			US-PATENT-CLASS-55-466			US-PATENT-CLASS-564-243
			US-PATENT-CLASS-363-67			US-PATENT-CLASS-55-6			US-PATENT-4,434,106
			US-PATENT-CLASS-363-71			US-PATENT-CLASS-55-96	N84-22745* #	c 27	NASA-CASE-ARC-11368-3
			US-PATENT-4,426,678			US-PATENT-CLASS-60-275			US-PATENT-APPL-SN-288267
N84-16454* #	c 33		NASA-CASE-GSC-12645-1			US-PATENT-CLASS-60-303			US-PATENT-APPL-SN-512795
			US-PATENT-APPL-SN-284314			US-PATENT-CLASS-60-311			US-PATENT-CLASS-428-370
			US-PATENT-CLASS-324-79R			US-PATENT-4,376,837			US-PATENT-CLASS-428-408
			US-PATENT-CLASS-324-83A	N84-20522* #	c 06	NASA-CASE-LAR-12984-1			US-PATENT-CLASS-428-902
			US-PATENT-CLASS-324-83R			US-PATENT-APPL-SN-578387			US-PATENT-CLASS-428-920
			US-PATENT-CLASS-328-133	N84-20649* #	c 24	NASA-CASE-LAR-12887-1			US-PATENT-CLASS-525-417
			US-PATENT-CLASS-330-289			US-PATENT-APPL-SN-582493			US-PATENT-CLASS-526-262
			US-PATENT-4,425,543	N84-20670* #	c 26	NASA-CASE-GSC-12680-1			US-PATENT-CLASS-528-228
N84-16455* #	c 33		NASA-CASE-MFS-25616-1			US-PATENT-APPL-SN-580925			US-PATENT-CLASS-528-322
			US-PATENT-APPL-SN-325932	N84-20702* #	c 27	NASA-CASE-ARC-11512-1			US-PATENT-CLASS-548-415
			US-PATENT-CLASS-318-799			US-PATENT-APPL-SN-569373			US-PATENT-4,395,557
			US-PATENT-CLASS-323-243	N84-20808* #	c 35	NASA-CASE-ARC-11422-1			US-PATENT-4,433,115
			US-PATENT-CLASS-323-246			US-PATENT-APPL-SN-523991	N84-22746* #	c 27	NASA-CASE-LAR-12723-2
			US-PATENT-4,426,614	N84-20860* #	c 37	NASA-CASE-MFS-25956-1			US-PATENT-APPL-SN-199768

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N84-27974* #	c 33	US-PATENT-CLASS-329-124 US-PATENT-CLASS-375-120 US-PATENT-CLASS-375-77 US-PATENT-CLASS-375-81 US-PATENT-CLASS-455-202 US-PATENT-CLASS-455-208 US-PATENT-CLASS-455-260 US-PATENT-CLASS-455-265 US-PATENT-4,455,680 NASA-CASE-LEW-13736-1 US-PATENT-APPL-SN-434084 US-PATENT-CLASS-315-3.6 US-PATENT-CLASS-315-39.3 US-PATENT-CLASS-331-82 US-PATENT-CLASS-333-162 US-PATENT-4,459,562	N84-28204* #	c 44	US-PATENT-CLASS-126-419 US-PATENT-CLASS-126-438 US-PATENT-CLASS-126-451 US-PATENT-4,433,672 NASA-CASE-NPO-15662-1 US-PATENT-APPL-SN-392103 US-PATENT-CLASS-126-418 US-PATENT-CLASS-126-438 US-PATENT-CLASS-126-440 US-PATENT-4,449,514	N84-28590* #	c 74	US-PATENT-4,455,532 NASA-CASE-NPO-15805-1 US-PATENT-APPL-SN-296137 US-PATENT-CLASS-250-332 US-PATENT-CLASS-250-338 US-PATENT-4,443,701
N84-27975* #	c 33	NASA-CASE-MFS-25854-1 US-PATENT-APPL-SN-450166 US-PATENT-CLASS-318-729 US-PATENT-CLASS-318-809 US-PATENT-CLASS-323-300 US-PATENT-4,459,528	N84-28205* #	c 44	NASA-CASE-LEW-13653-1 US-PATENT-APPL-SN-352821 US-PATENT-CLASS-204-290 US-PATENT-CLASS-29-623.5 US-PATENT-CLASS-29-825 US-PATENT-CLASS-427-113 US-PATENT-CLASS-427-115 US-PATENT-CLASS-427-125 US-PATENT-CLASS-427-226 US-PATENT-CLASS-427-372.2 US-PATENT-CLASS-427-379 US-PATENT-CLASS-427-380 US-PATENT-CLASS-427-443 US-PATENT-CLASS-429-44 US-PATENT-4,454,649	N84-28732* #	c 02	NASA-CASE-LAR-12396-1 US-PATENT-APPL-SN-017889 US-PATENT-CLASS-244-35R US-PATENT-CLASS-416-223R US-PATENT-CLASS-416-242 US-PATENT-4,459,083
N84-28015* #	c 35	NASA-CASE-WLP-10055-1 US-PATENT-APPL-SN-352827 US-PATENT-CLASS-73-862.65 US-PATENT-4,425,808	N84-28292* #	c 47	NASA-CASE-LAR-12971-1 US-PATENT-APPL-SN-444149 US-PATENT-CLASS-250-356.1 US-PATENT-CLASS-73-189 US-PATENT-CLASS-73-861.71 US-PATENT-4,449,400	N84-29017* #	c 28	NASA-CASE-KSC-11304-1 US-PATENT-APPL-SN-603373
N84-28016* #	c 35	NASA-CASE-NPO-15423-1 US-PATENT-APPL-SN-361216 US-PATENT-CLASS-250-296 US-PATENT-4,435,642	N84-28361* #	c 51	NASA-CASE-ARC-11359-1 US-PATENT-APPL-SN-392092 US-PATENT-CLASS-264-41 US-PATENT-CLASS-521-141 US-PATENT-CLASS-521-142 US-PATENT-CLASS-521-149 US-PATENT-4,456,708	N84-32398* #	c 09	NAS 1.71:MFS-25962-1 NASA-CASE-MFS-25962-1 US-PATENT-APPL-SN-633180
N84-28017* #	c 35	NASA-CASE-NPO-15706-1 US-PATENT-APPL-SN-350475 US-PATENT-CLASS-310-154 US-PATENT-CLASS-310-171 US-PATENT-CLASS-310-688 US-PATENT-CLASS-335-222 US-PATENT-4,443,724	N84-28388* #	c 52	NASA-CASE-LAR-12650-1 US-PATENT-APPL-SN-264381 US-PATENT-CLASS-128-325 US-PATENT-CLASS-128-346 US-PATENT-CLASS-24-580 US-PATENT-4,416,266	N84-32424* #	c 18	NAS 1.71:MSC-20635-1 NASA-CASE-MSC-20635-1 US-PATENT-APPL-SN-588039
N84-28018* #	c 35	NASA-CASE-NFS-25754-1 US-PATENT-APPL-SN-359626 US-PATENT-CLASS-33-169F US-PATENT-CLASS-62-128 US-PATENT-CLASS-73-150R US-PATENT-CLASS-73-170R US-PATENT-CLASS-73-32R US-PATENT-CLASS-73-864.41 US-PATENT-4,398,412	N84-28389* #	c 52	NASA-CASE-LAR-12650-2 US-PATENT-APPL-SN-264381 US-PATENT-APPL-SN-465363 US-PATENT-CLASS-156-191 US-PATENT-CLASS-156-285 US-PATENT-CLASS-156-289 US-PATENT-CLASS-156-382 US-PATENT-CLASS-29-423 US-PATENT-CLASS-29-451 US-PATENT-4,447,943	N84-32425* #	c 20	NAS 1.71:LEW-14037-1 NASA-CASE-LEW-14037-1 US-PATENT-APPL-SN-636463
N84-28019* #	c 35	NASA-CASE-LAR-12743-1 US-PATENT-APPL-SN-372279 US-PATENT-CLASS-374-1 US-PATENT-CLASS-73-1B US-PATENT-4,426,874	N84-28484* #	c 54	NASA-CASE-MSC-20261-1 US-PATENT-APPL-SN-393586 US-PATENT-CLASS-2-161R US-PATENT-CLASS-2-164 US-PATENT-CLASS-2-167 US-PATENT-4,454,611	N84-32447* #	c 25	NAS 1.71:LAR-13257-1 NASA-CASE-LAR-13257-1 US-PATENT-APPL-SN-633178
N84-28065* #	c 36	NASA-CASE-GSC-12592-1 US-PATENT-APPL-SN-199766 US-PATENT-CLASS-372-103 US-PATENT-CLASS-372-4 US-PATENT-CLASS-372-71 US-PATENT-CLASS-372-93 US-PATENT-CLASS-372-95 US-PATENT-4,446,556	N84-28491* #	c 60	NASA-CASE-GSC-12447-2 US-PATENT-APPL-SN-128230 US-PATENT-APPL-SN-501060 US-PATENT-CLASS-364-900 US-PATENT-4,435,781	N84-32532* #	c 27	NAS 1.71:LAR-13270-1 NASA-CASE-LAR-13270-1 US-PATENT-APPL-SN-569536
N84-28081* #	c 37	NASA-CASE-NPO-14597-2 US-PATENT-APPL-SN-037194 US-PATENT-APPL-SN-401288 US-PATENT-CLASS-417-328 US-PATENT-CLASS-417-392 US-PATENT-CLASS-417-462 US-PATENT-4,449,894	N84-28492* #	c 60	NASA-CASE-MSC-20258-1 US-PATENT-APPL-SN-235472 US-PATENT-CLASS-340-825.21 US-PATENT-CLASS-340-825.5 US-PATENT-CLASS-364-900 US-PATENT-4,446,459	N84-32620* #	c 32	NAS 1.71:NPO-16256-1 NASA-CASE-NPO-16256-1 US-PATENT-APPL-SN-638586
N84-28082* #	c 37	NASA-CASE-GSC-12550-1 US-PATENT-APPL-SN-238888 US-PATENT-CLASS-73-468 US-PATENT-CLASS-74-5.5 US-PATENT-CLASS-74-573R US-PATENT-4,458,554	N84-28565* #	c 70	NASA-CASE-LEW-12919-2 US-PATENT-APPL-SN-264378 US-PATENT-APPL-SN-364072 US-PATENT-CLASS-313-106 US-PATENT-CLASS-313-107 US-PATENT-CLASS-313-351 US-PATENT-CLASS-315-5.38 US-PATENT-4,349,424 US-PATENT-4,417,175	N84-32913* #	c 44	NAS 1.71:MFS-25978-1 NASA-CASE-MFS-25978-1 US-PATENT-APPL-SN-636459
N84-28083* #	c 37	NASA-CASE-GSC-12762-1 US-PATENT-APPL-SN-364094 US-PATENT-CLASS-269-224 US-PATENT-CLASS-269-242 US-PATENT-CLASS-269-244 US-PATENT-CLASS-269-252 US-PATENT-CLASS-269-285 US-PATENT-4,448,408	N84-28568* #	c 71	NASA-CASE-MFS-25828-1 US-PATENT-APPL-SN-493866 US-PATENT-CLASS-137-838 US-PATENT-CLASS-366-106 US-PATENT-CLASS-425-6 US-PATENT-CLASS-65-142 US-PATENT-CLASS-65-160 US-PATENT-CLASS-65-21.3 US-PATENT-CLASS-65-21.4 US-PATENT-4,447,251	N84-33021* #	c 54	NAS 1.71:ARC-11534-1 NASA-CASE-ARC-11534-1 US-PATENT-APPL-SN-642602
N84-28084* #	c 37	NASA-CASE-LAR-12644-1 US-PATENT-APPL-SN-387728 US-PATENT-CLASS-74-753 US-PATENT-CLASS-74-758 US-PATENT-CLASS-74-812 US-PATENT-4,446,757	N84-28575* #	c 72	NASA-CASE-MFS-25641-1 US-PATENT-APPL-SN-342857 US-PATENT-CLASS-250-305 US-PATENT-CLASS-324-457 US-PATENT-CLASS-324-71.3 US-PATENT-CLASS-324-72.5	N84-33211* #	c 76	NAS 1.71:NPO-16045-1 NASA-CASE-NPO-16045-1 US-PATENT-APPL-SN-641146
N84-28085* #	c 37	NASA-CASE-LAR-12786-1 US-PATENT-APPL-SN-309292 US-PATENT-CLASS-30-180 US-PATENT-CLASS-30-188 US-PATENT-CLASS-30-228 US-PATENT-CLASS-30-249 US-PATENT-CLASS-30-272R US-PATENT-4,458,418				N84-33394* #	c 03	NAS 1.71:ARC-11423-1 NASA-CASE-ARC-11423-1 US-PATENT-APPL-SN-452466 US-PATENT-CLASS-297-DIG.5 US-PATENT-CLASS-428-246 US-PATENT-CLASS-428-280 US-PATENT-CLASS-428-287 US-PATENT-CLASS-428-304.4 US-PATENT-CLASS-428-319.1 US-PATENT-CLASS-428-423.5 US-PATENT-CLASS-428-71 US-PATENT-CLASS-428-921 US-PATENT-CLASS-5-459 US-PATENT-4,483,465
N84-28203* #	c 44	NASA-CASE-NPO-15388-1 US-PATENT-APPL-SN-284286				N84-33400* #	c 05	NAS 1.71:ARC-13233-1 NASA-CASE-LAR-13233-1 US-PATENT-APPL-SN-649329

N84-33661* #	c 33	US-PATENT-APPL-SN-481086 US-PATENT-CLASS-307-87 US-PATENT-CLASS-322-25 US-PATENT-CLASS-322-29 US-PATENT-CLASS-322-47 US-PATENT-CLASS-322-95 US-PATENT-4,388,585 US-PATENT-4,473,792 NAS 1.71:MFS-25852-1 NASA-CASE-MFS-25852-1 US-PATENT-APPL-SN-450319 US-PATENT-CLASS-318-729 US-PATENT-CLASS-318-802 US-PATENT-4,469,998 NAS 1.71:LEW-13495-1 NASA-CASE-LEW-13495-1 US-PATENT-APPL-SN-368188 US-PATENT-CLASS-323-901 US-PATENT-CLASS-383-22 US-PATENT-CLASS-383-49 US-PATENT-4,484,710 NAS 1.71:GSC-12882-1 NASA-CASE-GSC-12882-1 US-PATENT-APPL-SN-350477 US-PATENT-CLASS-250-367 US-PATENT-CLASS-250-385 US-PATENT-CLASS-250-483.1 US-PATENT-CLASS-357-29 US-PATENT-CLASS-357-30 US-PATENT-CLASS-357-32 US-PATENT-4,472,728 NAS 1.71:NPO-13556-1 NASA-CASE-NPO-13556-1 US-PATENT-APPL-SN-561389 US-PATENT-CLASS-250-339 US-PATENT-CLASS-358-188 US-PATENT-CLASS-358-189 US-PATENT-CLASS-358-73 US-PATENT-CLASS-358-74 US-PATENT-4,043,668 NAS 1.71:NPO-15644-1 NASA-CASE-NPO-15644-1 US-PATENT-APPL-SN-358088 US-PATENT-CLASS-250-251 US-PATENT-CLASS-250-252.1 US-PATENT-CLASS-250-372 US-PATENT-4,469,942 NAS 1.71:MFS-25717-1 NASA-CASE-MFS-25717-1 US-PATENT-APPL-SN-441897 US-PATENT-CLASS-175-45 US-PATENT-CLASS-299-1 US-PATENT-4,466,667 NAS 1.71:NPO-15341-1 NASA-CASE-NPO-15341-1 US-PATENT-APPL-SN-315583 US-PATENT-CLASS-180-168 US-PATENT-CLASS-318-587 US-PATENT-CLASS-340-905 US-PATENT-CLASS-340-988 US-PATENT-4,472,716 NAS 1.71:MFS-25862-2 NASA-CASE-MFS-25862-2 US-PATENT-APPL-SN-460509 US-PATENT-CLASS-73-12 US-PATENT-CLASS-73-588 US-PATENT-4,470,293 NAS 1.71:LEW-12995-1 NASA-CASE-LEW-12995-1 US-PATENT-APPL-SN-157150 US-PATENT-CLASS-60-303 US-PATENT-CLASS-60-606 US-PATENT-4,449,370 NASA-CASE-NPO-15351-2 US-PATENT-APPL-SN-224231 US-PATENT-APPL-SN-412039 US-PATENT-CLASS-73-178-R US-PATENT-4,346,595 US-PATENT-4,474,062 NASA-CASE-LAR-12950-1 US-PATENT-APPL-SN-481106 US-PATENT-CLASS-73-147 US-PATENT-4,475,385 NAS 1.71:LAR-13230-1 NASA-CASE-LAR-13230-1 US-PATENT-APPL-SN-548584 US-PATENT-CLASS-523-454 US-PATENT-CLASS-523-458 US-PATENT-CLASS-525-484 US-PATENT-CLASS-528-407 US-PATENT-CLASS-528-92 US-PATENT-4,473,674 NAS 1.71:NPO-15519-1 NASA-CASE-NPO-15519-1 US-PATENT-APPL-SN-314928 US-PATENT-CLASS-343-5-CM
N84-34705* #	c 35	US-PATENT-CLASS-343-5-DP US-PATENT-CLASS-343-5-FT US-PATENT-4,471,357 NAS 1.71:NPO-15558-1 NASA-CASE-NPO-15558-1 US-PATENT-APPL-SN-373770 US-PATENT-CLASS-250-343 US-PATENT-CLASS-250-351 US-PATENT-CLASS-358-434 US-PATENT-CLASS-358-51 US-PATENT-4,474,471 NAS 1.71:NPO-15808-1 NASA-CASE-NPO-15808-1 US-PATENT-APPL-SN-383068 US-PATENT-CLASS-128-415 US-PATENT-CLASS-4-498 US-PATENT-4,470,403 NASA-CASE-GSC-12852-1 US-PATENT-APPL-SN-377891 US-PATENT-CLASS-128-24-A US-PATENT-CLASS-128-328 US-PATENT-4,474,180 NASA-CASE-NPO-15786-1 US-PATENT-APPL-SN-386103 US-PATENT-CLASS-204-1T US-PATENT-CLASS-204-37.6 US-PATENT-CLASS-204-58R US-PATENT-CLASS-324-158D US-PATENT-CLASS-324-158T US-PATENT-4,482,871 NASA-CASE-NPO-15829-1 US-PATENT-APPL-SN-371351 US-PATENT-CLASS-156-DIG.64 US-PATENT-CLASS-156-DIG.88 US-PATENT-CLASS-156-DIG.88 US-PATENT-CLASS-156-608 US-PATENT-CLASS-156-617-SP US-PATENT-CLASS-156-617-V US-PATENT-CLASS-422-246 US-PATENT-CLASS-422-249 US-PATENT-4,489,552 NAS 1.71:LAR-13173-1 NASA-CASE-LAR-13173-1 US-PATENT-APPL-SN-690274 NAS 1.71:LAR-12787-2 NASA-CASE-LAR-12787-2 US-PATENT-APPL-SN-301078 US-PATENT-APPL-SN-5226628 US-PATENT-CLASS-244-214 US-PATENT-CLASS-244-90R US-PATENT-4,485,992 NAS 1.71:KSC-121218-1 NASA-CASE-KSC-121218-1 US-PATENT-APPL-SN-387649 US-PATENT-CLASS-434-242 US-PATENT-CLASS-434-243 US-PATENT-CLASS-434-35 US-PATENT-CLASS-434-49 US-PATENT-4,490,117 NAS 1.71:MFG-25989-1 NASA-CASE-MFG-25989-1 US-PATENT-APPL-SN-690273 NAS 1.71:LAR-12723-1 NASA-CASE-LAR-12723-1 US-PATENT-APPL-SN-199768 US-PATENT-CLASS-525-420 US-PATENT-CLASS-528-183 US-PATENT-CLASS-528-192 US-PATENT-CLASS-528-220 US-PATENT-CLASS-528-336 US-PATENT-CLASS-528-345 US-PATENT-4,395,540 NAS 1.71:LAR-12858-2 NASA-CASE-LAR-12858-2 US-PATENT-APPL-SN-407240 US-PATENT-APPL-SN-492282 US-PATENT-CLASS-264-DIG.65 US-PATENT-CLASS-264-112 US-PATENT-CLASS-264-120 US-PATENT-CLASS-264-137 US-PATENT-CLASS-264-152 US-PATENT-CLASS-264-258 US-PATENT-CLASS-264-331.12 US-PATENT-CLASS-264-331.19 US-PATENT-CLASS-528-226 US-PATENT-CLASS-528-239 US-PATENT-CLASS-528-241 US-PATENT-CLASS-528-258 US-PATENT-CLASS-528-279 US-PATENT-4,398,021 US-PATENT-4,489,027 NAS 1.71:LAR-12894-1 NASA-CASE-LAR-12894-1 US-PATENT-APPL-SN-516087 US-PATENT-CLASS-156-273.7 US-PATENT-CLASS-24-304
N85-20126* #	c 27	US-PATENT-CLASS-24-447 US-PATENT-CLASS-24-450 US-PATENT-CLASS-24-693 US-PATENT-4,488,335 NAS 1.71:MFS-25862-1 NASA-CASE-MFS-25862-1 US-PATENT-APPL-SN-485368 US-PATENT-CLASS-73-579 US-PATENT-CLASS-73-582 US-PATENT-CLASS-73-588 US-PATENT-4,479,386 NAS 1.71:LAR-13353-1 NASA-CASE-LAR-13353-1 US-PATENT-APPL-SN-643524 NAS 1.71:LEW-14080-1 NASA-CASE-LEW-14080-1 US-PATENT-APPL-SN-628868 US-PATENT-CLASS-204-192C US-PATENT-CLASS-204-192R US-PATENT-CLASS-204-192SP US-PATENT-CLASS-423-DIG.10 US-PATENT-CLASS-423-414 US-PATENT-CLASS-423-445 US-PATENT-CLASS-423-446 US-PATENT-CLASS-423-449 US-PATENT-4,480,229 NAS 1.71:LAR-13254-1 NASA-CASE-LAR-13254-1 US-PATENT-APPL-SN-668432 NAS 1.71:LEW-14130-1 NASA-CASE-LEW-14130-1 US-PATENT-APPL-SN-659475 NAS 1.71:GSC-12892-1 NASA-CASE-GSC-12892-1 US-PATENT-APPL-SN-655606 NAS 1.71:LAR-13151-1 NASA-CASE-LAR-13151-1 US-PATENT-APPL-SN-683101 NAS 1.71:LEW-13935-1 NASA-CASE-LEW-13935-1 US-PATENT-APPL-SN-700255 NAS 1.71:MSC-20187-1 NASA-CASE-MSC-20187-1 US-PATENT-APPL-SN-649327 NAS 1.71:NPO-18299-1 NASA-CASE-NPO-18299-1 US-PATENT-APPL-SN-541526 NAS 1.71:NPO-163371-1 NASA-CASE-NPO-163371-1 US-PATENT-APPL-SN-683111 NAS 1.71:GSC-12789-1 NASA-CASE-GSC-12789-1 US-PATENT-APPL-SN-409680 US-PATENT-CLASS-177-147 US-PATENT-CLASS-177-260 US-PATENT-CLASS-73-862.54 US-PATENT-4,479,580 NAS 1.71:LAR-13065-1 NASA-CASE-LAR-13065-1 US-PATENT-APPL-SN-484745 US-PATENT-CLASS-73-187 US-PATENT-4,485,671 NAS 1.71:MFS-25825-1 NASA-CASE-MFS-25825-1 US-PATENT-APPL-SN-657309 NAS 1.71:MFS-25981-1 NASA-CASE-MFS-25981-1 US-PATENT-APPL-SN-657310 NAS 1.71:MFS-28008-1 NASA-CASE-MFS-28008-1 US-PATENT-APPL-SN-684194 NAS 1.71:ARC-11547-1 NASA-CASE-ARC-11547-1 US-PATENT-APPL-SN-692745 NAS 1.71:GSC-12582-2 NASA-CASE-GSC-12582-2 US-PATENT-APPL-SN-220213 US-PATENT-APPL-SN-415980 US-PATENT-CLASS-104-281 US-PATENT-CLASS-104-284 US-PATENT-CLASS-308-10 US-PATENT-4,473,259 NAS 1.71:MSC-20112-1 NASA-CASE-MSC-20112-1 US-PATENT-APPL-SN-392104 US-PATENT-CLASS-251-265 US-PATENT-CLASS-251-267 US-PATENT-CLASS-251-284 US-PATENT-CLASS-251-297 US-PATENT-CLASS-74-424.8B US-PATENT-CLASS-74-424.8VA US-PATENT-4,483,512 NAS 1.71:LEW-13414-1 NASA-CASE-LEW-13414-1 US-PATENT-APPL-SN-465364 US-PATENT-CLASS-136-266



		US-PATENT-CLASS-427-85			US-PATENT-CLASS-528-186			US-PATENT-CLASS-357-30
		US-PATENT-4,478,879			US-PATENT-CLASS-528-187			US-PATENT-4,482,779
N85-20535* #	c 44	NAS 1.71:LEW-14177-1			US-PATENT-CLASS-528-226	N85-21493* #	c 33	NAS 1.71:NPO-15920-1
		NASA-CASE-LEW-14177-1			US-PATENT-CLASS-528-229			NASA-CASE-NPO-15920-1
N85-20639* #	c 52	US-PATENT-APPL-SN-689140			US-PATENT-CLASS-528-352			US-PATENT-APPL-SN-403848
		NASA 1.71:MFS-26011-1-SB			US-PATENT-CLASS-528-353			US-PATENT-CLASS-343-17.7
		NASA-CASE-MFS-26011-1-SB	N85-21349* #	c 27	US-PATENT-4,499,260			US-PATENT-CLASS-343-376
		US-PATENT-APPL-SN-655605			NAS 1.71:LAR-12775-2			US-PATENT-4,488,155
N85-20666* #	c 54	NAS 1.71:ARC-11610-1			NASA-CASE-LAR-12775-2	N85-21568* #	c 34	NAS 1.71:LAR-12588-1
		NASA-CASE-ARC-11610-1			US-PATENT-APPL-SN-308201			NASA-CASE-LAR-12588-1
		US-PATENT-APPL-SN-684190			US-PATENT-APPL-SN-461788			US-PATENT-APPL-SN-234222
N85-20680* #	c 60	NAS 1.71:NPO-15982-1			US-PATENT-CLASS-525-181			US-PATENT-CLASS-165-104.26
		NASA-CASE-NPO-15982-1			US-PATENT-CLASS-525-182			US-PATENT-CLASS-73-179
		US-PATENT-APPL-SN-673685			US-PATENT-CLASS-525-183			US-PATENT-CLASS-73-708
N85-20868* #	c 74	NAS 1.71:GSC-12825-1			US-PATENT-CLASS-525-184			US-PATENT-4,485,670
		NASA-CASE-GSC-12825-1			US-PATENT-CLASS-525-474	N85-21595* #	c 35	NAS 1.71:MSC-20275-1
		US-PATENT-APPL-SN-698641			US-PATENT-4,389,504			NASA-CASE-MSC-20275-1
N85-20906* #	c 76	NAS 1.71:NPO-16394-1			US-PATENT-4,497,935			US-PATENT-APPL-SN-425205
		NASA-CASE-NPO-16394-1	N85-21350* #	c 27	NAS 1.71:LEW-13770-3			US-PATENT-CLASS-222-309
		US-PATENT-APPL-SN-690284			NASA-CASE-LEW-13770-3			US-PATENT-CLASS-222-340
N85-21147* #	c 05	NAS 1.71:LAR-12979-1			US-PATENT-APPL-SN-516217			US-PATENT-CLASS-222-43
		NASA-CASE-LAR-12979-1			US-PATENT-APPL-SN-561431			US-PATENT-CLASS-222-48
		US-PATENT-APPL-SN-508371			US-PATENT-CLASS-526-217			US-PATENT-4,488,663
		US-PATENT-CLASS-244-139			US-PATENT-CLASS-526-262	N85-21596* #	c 35	NAS 1.71:NPO-15759-1
		US-PATENT-CLASS-244-147			US-PATENT-CLASS-528-229			NASA-CASE-NPO-15759-1
		US-PATENT-CLASS-244-75R			US-PATENT-CLASS-528-315			US-PATENT-APPL-SN-367136
		US-PATENT-4,496,122			US-PATENT-CLASS-528-322			US-PATENT-CLASS-324-427
N85-21178* #	c 09	NAS 1.71:LAR-13014-1			US-PATENT-CLASS-528-336			US-PATENT-CLASS-429-58
		NASA-CASE-LAR-13014-1			US-PATENT-CLASS-528-342	N85-21597* #	c 35	US-PATENT-4,499,424
		US-PATENT-APPL-SN-527918			US-PATENT-4,497,948			NAS 1.71:NPO-16027-1
		US-PATENT-CLASS-73-147	N85-21351* #	c 27	NAS 1.71:LEW-13770-4			NASA-CASE-NPO-16027-1
		US-PATENT-4,493,211			NASA-CASE-LEW-13770-4			US-PATENT-APPL-SN-500044
N85-21256* #	c 20	NAS 1.71:LEW-13881-1			US-PATENT-APPL-SN-516217			US-PATENT-CLASS-73-40.5A
		NASA-CASE-LEW-13881-1			US-PATENT-APPL-SN-561429			US-PATENT-CLASS-73-753
		US-PATENT-APPL-SN-473498			US-PATENT-CLASS-526-262			US-PATENT-4,498,333
		US-PATENT-CLASS-60-202			US-PATENT-CLASS-528-229	N85-21598* #	c 35	NAS 1.71:WLP-10055-2
		US-PATENT-4,466,242			US-PATENT-CLASS-528-322			NASA-CASE-WLP-10055-2
N85-21266* #	c 24	NAS 1.71:LEW-13324-2			US-PATENT-CLASS-528-342			US-PATENT-APPL-SN-352827
		NASA-CASE-LEW-13324-2			US-PATENT-4,497,939			US-PATENT-APPL-SN-526770
		US-PATENT-APPL-SN-375784	N85-21352* #	c 27	NAS 1.71:LEW-13770-5			US-PATENT-CLASS-29-610SG
		US-PATENT-APPL-SN-523297			NASA-CASE-LEW-13770-5			US-PATENT-4,425,808
		US-PATENT-CLASS-428-633			US-PATENT-APPL-SN-516217			US-PATENT-4,498,231
		US-PATENT-CLASS-428-656			US-PATENT-APPL-SN-561435	N85-21610* #	c 35	NAS 1.71:LAR-13294-1
		US-PATENT-CLASS-428-678			US-PATENT-CLASS-526-262			NASA-CASE-LAR-13294-1
		US-PATENT-CLASS-428-679			US-PATENT-CLASS-528-229			US-PATENT-APPL-SN-706681
		US-PATENT-CLASS-428-680			US-PATENT-CLASS-528-322	N85-21631* #	c 36	NAS 1.71:NPO-15790-1
		US-PATENT-CLASS-428-681			US-PATENT-CLASS-528-342			NASA-CASE-NPO-15790-1
		US-PATENT-CLASS-428-682			US-PATENT-4,497,940			US-PATENT-APPL-SN-423016
		US-PATENT-CLASS-428-683	N85-21360* #	c 27	NAS 1.71:LAR-13351-1			US-PATENT-CLASS-250-339
		US-PATENT-CLASS-428-684			NASA-CASE-LAR-13351-1			US-PATENT-CLASS-250-343
		US-PATENT-4,485,151			US-PATENT-APPL-SN-643589			US-PATENT-4,489,239
N85-21267* #	c 24	NAS 1.71:LEW-13837-2	N85-21362* #	c 27	NAS 1.71:ARC-11512-2	N85-21639* #	c 36	NAS 1.71:GSC-12558-1
		NASA-CASE-LEW-13837-2			NASA-CASE-ARC-11512-2			NASA-CASE-GSC-12558-1
		US-PATENT-APPL-SN-495381			US-PATENT-APPL-SN-641153			US-PATENT-APPL-SN-383086
		US-PATENT-APPL-SN-591089	N85-21364* #	c 27	NAS 1.71:ARC-11533-1			US-PATENT-CLASS-356-43
		US-PATENT-CLASS-204-192C			NASA-CASE-ARC-11533-1			US-PATENT-CLASS-356-45
		US-PATENT-CLASS-204-192N			US-PATENT-APPL-SN-641147			US-PATENT-CLASS-374-137
		US-PATENT-CLASS-204-192R	N85-21404* #	c 31	NAS 1.71:GSC-12799-1			US-PATENT-CLASS-73-705
		US-PATENT-CLASS-423-445			NASA-CASE-GSC-12799-1			US-PATENT-4,493,553
		US-PATENT-CLASS-423-446			US-PATENT-APPL-SN-461724	N85-21649* #	c 37	NAS 1.71:MSC-20319-1
		US-PATENT-CLASS-423-449			US-PATENT-CLASS-31-35			NASA-CASE-MSC-20319-1
		US-PATENT-CLASS-427-39			US-PATENT-CLASS-310-22			US-PATENT-APPL-SN-393582
		US-PATENT-4,437,962			US-PATENT-CLASS-417-417			US-PATENT-CLASS-292-252
		US-PATENT-4,495,044			US-PATENT-CLASS-417-488			US-PATENT-CLASS-403-317
N85-21279* #	c 25	NAS 1.71:GSC-12808-1			US-PATENT-CLASS-62-6			US-PATENT-CLASS-81-177G
		NASA-CASE-GSC-12808-1			US-PATENT-CLASS-92-98R			US-PATENT-4,483,639
		US-PATENT-APPL-SN-462497			US-PATENT-4,500,265	N85-21650* #	c 37	NAS 1.71:NPO-15483-1
		US-PATENT-CLASS-376-159	N85-21427* #	c 32	NAS 1.71:MSC-18578-1			NASA-CASE-NPO-15483-1
		US-PATENT-4,483,817			NASA-CASE-MSC-18578-1			US-PATENT-APPL-SN-387648
N85-21280* #	c 25	NAS 1.71:MFS-25721-1			US-PATENT-APPL-SN-367132			US-PATENT-CLASS-125-13R
		NASA-CASE-MFS-25721-1			US-PATENT-CLASS-358-161			US-PATENT-CLASS-125-15
		US-PATENT-APPL-SN-492964			US-PATENT-CLASS-358-174			US-PATENT-CLASS-51-73R
		US-PATENT-CLASS-556-410			US-PATENT-CLASS-358-217			US-PATENT-CLASS-82-90
		US-PATENT-4,474,975			US-PATENT-CLASS-358-219			US-PATENT-CLASS-83-664
N85-21347* #	c 27	NAS 1.71:ARC-11368-2			US-PATENT-4,495,520			US-PATENT-CLASS-83-676
		NASA-CASE-ARC-11368-2	N85-21428* #	c 32	NAS 1.71:NPO-15433-1			US-PATENT-4,475,527
		US-PATENT-APPL-SN-175452			NASA-CASE-NPO-15433-1	N85-21651* #	c 37	NAS 1.71:LAR-12868-1
		US-PATENT-APPL-SN-288267			US-PATENT-APPL-SN-250585			NASA-CASE-LAR-12868-1
		US-PATENT-APPL-SN-502820			US-PATENT-CLASS-364-200			US-PATENT-APPL-SN-322321
		US-PATENT-CLASS-526-262			US-PATENT-4,493,021			US-PATENT-CLASS-374-208
		US-PATENT-CLASS-526-274	N85-21441* #	c 32	NAS 1.71:LAR-13310-1			US-PATENT-CLASS-374-210
		US-PATENT-CLASS-528-167			NASA-CASE-LAR-13310-1			US-PATENT-4,491,427
		US-PATENT-CLASS-528-168			US-PATENT-APPL-SN-709257	N85-21652* #	c 37	NAS 1.71:NPO-15851-1
		US-PATENT-CLASS-528-170			NAS 1.71:NPO-15560-1			NASA-CASE-NPO-15851-1
		US-PATENT-CLASS-528-321	N85-21491* #	c 33	NASA-CASE-NPO-15560-1			US-PATENT-APPL-SN-415879
		US-PATENT-CLASS-528-322			US-PATENT-APPL-SN-275909			US-PATENT-CLASS-134-37
		US-PATENT-4,276,344			US-PATENT-CLASS-250-426			US-PATENT-CLASS-15-406
		US-PATENT-4,395,557			US-PATENT-CLASS-313-131A			US-PATENT-CLASS-422-129
		US-PATENT-4,496,701			US-PATENT-CLASS-315-111.31			US-PATENT-CLASS-422-199
N85-21348* #	c 27	NASA-CASE-ARC-11413-1			US-PATENT-CLASS-315-111.81			US-PATENT-4,500,492
		US-PATENT-APPL-SN-440656			US-PATENT-4,475,063	N85-21723* #	c 43	NAS 1.71:NPO-15651-1
		US-PATENT-CLASS-528-125	N85-21492* #	c 33	NAS 1.71:LEW-13833-1			NASA-CASE-NPO-15651-1
		US-PATENT-CLASS-528-126			NASA-CASE-LEW-13833-1			US-PATENT-APPL-SN-375620
		US-PATENT-CLASS-528-128			US-PATENT-APPL-SN-486471			US-PATENT-CLASS-343-352
		US-PATENT-CLASS-528-166			US-PATENT-CLASS-136-255			US-PATENT-CLASS-374-122
		US-PATENT-CLASS-528-185			US-PATENT-CLASS-357-12			US-PATENT-4,499,470

- N85-21768\* # c 44 ..... NAS 1.71:LEW-13827-1  
NASA-CASE-LEW-13827-1  
US-PATENT-APPL-SN-486470  
US-PATENT-CLASS-136-225  
US-PATENT-CLASS-136-246  
US-PATENT-CLASS-357-30  
US-PATENT-4,482,778
- N85-21769\* # c 44 ..... NAS 1.71:MFS-25637-1  
NASA-CASE-MFS-25637-1  
US-PATENT-APPL-SN-375684  
US-PATENT-CLASS-290-1R  
US-PATENT-CLASS-290-4R  
US-PATENT-CLASS-307-84  
US-PATENT-CLASS-307-66  
US-PATENT-CLASS-318-46  
US-PATENT-CLASS-318-729  
US-PATENT-4,489,243
- N85-21846\* # c 46 ..... NAS 1.71:NPO-15430-1  
NASA-CASE-NPO-15430-1  
US-PATENT-APPL-SN-322317  
US-PATENT-CLASS-343-352  
US-PATENT-CLASS-343-460  
US-PATENT-CLASS-343-5W  
US-PATENT-4,463,357
- N85-21986\* # c 54 ..... NAS 1.71:ARC-11543-1  
NASA-CASE-ARC-11543-1  
US-PATENT-APPL-SN-684192
- N85-21987\* # c 54 ..... NAS 1.71:ARC-11616-1  
NASA-CASE-ARC-11616-1  
US-PATENT-APPL-SN-684193
- N85-21992\* # c 60 ..... NAS 1.71:NPO-15295-1  
NASA-CASE-NPO-15295-1  
US-PATENT-APPL-SN-291645  
US-PATENT-CLASS-364-200  
US-PATENT-4,481,570
- N85-22104\* # c 71 ..... NAS 1.71:NPO-15466-1  
NASA-CASE-NPO-15466-1  
US-PATENT-APPL-SN-361217  
US-PATENT-CLASS-23-313R  
US-PATENT-CLASS-55-15  
US-PATENT-CLASS-55-277  
US-PATENT-4,475,921
- N85-22105\* # c 71 ..... NAS 1.71:NPO-16022-1  
NASA-CASE-NPO-16022-1  
US-PATENT-APPL-SN-526750  
US-PATENT-CLASS-73-505  
US-PATENT-4,463,606
- N85-22139\* # c 74 ..... NAS 1.71:NPO-15155-1  
NASA-CASE-NPO-15155-1  
US-PATENT-APPL-SN-242797  
US-PATENT-CLASS-250-221  
US-PATENT-CLASS-340-555  
US-PATENT-4,479,053
- N85-22178\* # c 76 ..... NAS 1.71:NPO-15800-2  
NASA-CASE-NPO-15800-2  
US-PATENT-APPL-SN-674395
- N85-22877\* # c 33 ..... NAS 1.71:MFS-25861-1  
NASA-CASE-MFS-25861-1  
US-PATENT-APPL-SN-504345  
US-PATENT-CLASS-318-729  
US-PATENT-CLASS-318-812  
US-PATENT-4,489,264
- N85-23396\* # c 74 ..... NAS 1.71:NPO-15801-1  
NASA-CASE-NPO-15801-1  
US-PATENT-APPL-SN-478130  
US-PATENT-CLASS-350-168  
US-PATENT-CLASS-350-505  
US-PATENT-CLASS-350-619  
US-PATENT-CLASS-356-323  
US-PATENT-CLASS-356-330  
US-PATENT-CLASS-356-331  
US-PATENT-4,497,540
- N85-25436\* # c 24 ..... NAS 1.15:76884  
NASA-TM-76884
- N85-28922\* # c 02 ..... NAS 1.71:LAR-13286-1  
NASA-CASE-LAR-13286-1  
US-PATENT-APPL-SN-686959
- N85-28951\* # c 09 ..... NAS 1.71:MFS-28057-1  
NASA-CASE-MFS-28057-1  
US-PATENT-APPL-SN-729766
- N85-28973\* # c 23 ..... NAS 1.71:ARC-13262-1  
NASA-CASE-ARC-13262-1  
US-PATENT-APPL-SN-608741  
US-PATENT-CLASS-525-532  
US-PATENT-CLASS-525-534  
US-PATENT-CLASS-528-86  
US-PATENT-4,510,296
- N85-28975\* # c 24 ..... NAS 1.71:LAR-13150-1  
NASA-CASE-LAR-13150-1  
US-PATENT-APPL-SN-729767
- N85-28976\* # c 24 ..... NAS 1.71:ARC-11615-1-SB  
NASA-CASE-ARC-11615-1-SB  
US-PATENT-APPL-SN-706682
- N85-28982\* # c 25 ..... NASA-CASE-LEW-13770-2  
US-PATENT-APPL-SN-404809  
US-PATENT-APPL-SN-516217  
US-PATENT-CLASS-526-262
- US-PATENT-CLASS-528-322  
US-PATENT-CLASS-528-342  
US-PATENT-4,455,418  
US-PATENT-4,514,557
- N85-29005\* # c 26 ..... NASA-CASE-NPO-15928-1  
US-PATENT-APPL-SN-537816  
US-PATENT-CLASS-204-192N  
US-PATENT-CLASS-427-38  
US-PATENT-CLASS-427-47  
US-PATENT-4,522,844
- N85-29043\* # c 27 ..... NASA-CASE-NPO-16103-1  
US-PATENT-APPL-SN-617871  
US-PATENT-CLASS-525-26  
US-PATENT-CLASS-525-47  
US-PATENT-CLASS-526-328  
US-PATENT-CLASS-526-329.2  
US-PATENT-CLASS-528-288  
US-PATENT-CLASS-528-289  
US-PATENT-CLASS-528-303  
US-PATENT-CLASS-528-304  
US-PATENT-4,523,008
- N85-29044\* # c 27 ..... NASA-CASE-GSC-12883-1  
US-PATENT-APPL-SN-604337  
US-PATENT-CLASS-523-135  
US-PATENT-CLASS-524-388  
US-PATENT-CLASS-524-567  
US-PATENT-4,518,722
- N85-29082\* # c 31 ..... NASA-CASE-NPO-16257-1  
US-PATENT-APPL-SN-588164  
US-PATENT-CLASS-62-3  
US-PATENT-4,507,928
- N85-29083\* # c 31 ..... NASA-CASE-LAR-13181-1  
US-PATENT-APPL-SN-507623  
US-PATENT-CLASS-156-272.4  
US-PATENT-CLASS-156-273.9  
US-PATENT-CLASS-156-380.2  
US-PATENT-CLASS-219-10.43  
US-PATENT-CLASS-219-10.49  
US-PATENT-CLASS-219-10.53  
US-PATENT-CLASS-219-10.77  
US-PATENT-4,521,659
- N85-29084\* # c 31 ..... NAS 1.71:NPO-16393-1-CU  
NASA-CASE-NPO-16393-1-CU  
US-PATENT-APPL-SN-701486
- N85-29117\* # c 32 ..... NASA-CASE-NPO-15432-1  
US-PATENT-APPL-SN-425204  
US-PATENT-CLASS-358-109  
US-PATENT-CLASS-358-133  
US-PATENT-4,513,317
- N85-29118\* # c 32 ..... NASA-CASE-NPO-15743-1  
US-PATENT-APPL-SN-448881  
US-PATENT-CLASS-343-876  
US-PATENT-CLASS-455-73  
US-PATENT-4,503,436
- N85-29121\* # c 32 ..... NAS 1.71:NPO-16414-1-CU  
NASA-CASE-NPO-16414-1-CU  
US-PATENT-APPL-SN-727719
- N85-29142\* # c 33 ..... NASA-CASE-NPO-15553-1  
US-PATENT-APPL-SN-437912  
US-PATENT-CLASS-156-DIG.62  
US-PATENT-CLASS-364-400  
US-PATENT-CLASS-364-453  
US-PATENT-CLASS-74-5.6D  
US-PATENT-4,521,854
- N85-29143\* # c 33 ..... NASA-CASE-NPO-15890-1-CU  
US-PATENT-APPL-SN-556513  
US-PATENT-CLASS-331-3  
US-PATENT-CLASS-331-31  
US-PATENT-CLASS-331-36C  
US-PATENT-CLASS-331-94.1  
US-PATENT-CLASS-331-96  
US-PATENT-CLASS-333-231  
US-PATENT-4,517,530
- N85-29144\* # c 33 ..... NASA-CASE-LEW-13102-1  
US-PATENT-APPL-SN-282298  
US-PATENT-CLASS-429-206  
US-PATENT-CLASS-429-249  
US-PATENT-4,505,998
- N85-29145\* # c 33 ..... NASA-CASE-GSC-12788-1  
US-PATENT-APPL-SN-434085  
US-PATENT-CLASS-307-271  
US-PATENT-CLASS-307-520  
US-PATENT-CLASS-307-521  
US-PATENT-CLASS-307-529  
US-PATENT-CLASS-328-167  
US-PATENT-CLASS-330-302  
US-PATENT-CLASS-330-306  
US-PATENT-4,521,702
- N85-29146\* # c 33 ..... NASA-CASE-GSC-12817-1  
US-PATENT-APPL-SN-506477  
US-PATENT-CLASS-336-198  
US-PATENT-CLASS-336-84C  
US-PATENT-4,510,476
- N85-29147\* # c 33 ..... NASA-CASE-GSC-12818-1  
US-PATENT-APPL-SN-511362  
US-PATENT-CLASS-307-82
- US-PATENT-CLASS-363-100  
US-PATENT-CLASS-363-19  
US-PATENT-CLASS-363-23  
US-PATENT-CLASS-363-61  
US-PATENT-CLASS-363-71  
US-PATENT-CLASS-378-104  
US-PATENT-CLASS-378-112  
US-PATENT-4,517,472  
NAS 1.71:LEW-14108-1  
NASA-CASE-LEW-14108-1  
US-PATENT-APPL-SN-732321  
NAS 1.71:ARC-11613-1  
NASA-CASE-ARC-11613-1  
US-PATENT-APPL-SN-739792  
NASA-CASE-LEW-12950-2  
US-PATENT-APPL-SN-202228  
US-PATENT-APPL-SN-507626  
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US-PATENT-CLASS-165-32  
US-PATENT-CLASS-310-306  
US-PATENT-4,506,183  
NASA-CASE-MSC-20497-1  
US-PATENT-APPL-SN-615505  
US-PATENT-CLASS-122-366  
US-PATENT-CLASS-165-1  
US-PATENT-CLASS-165-104.26  
US-PATENT-4,515,207  
NAS 1.71:NPO-16494-1-CU  
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NASA-CASE-NPO-15722-1  
US-PATENT-APPL-SN-457992  
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US-PATENT-CLASS-204-430  
US-PATENT-CLASS-73-336.5  
US-PATENT-4,514,178  
NASA-CASE-MSC-18866-1  
US-PATENT-APPL-SN-350471  
US-PATENT-CLASS-422-103  
US-PATENT-CLASS-422-86  
US-PATENT-CLASS-422-88  
US-PATENT-CLASS-436-2  
US-PATENT-CLASS-73-40.7  
US-PATENT-CLASS-73-863.86  
US-PATENT-CLASS-73-864.52  
US-PATENT-4,515,751  
NASA-CASE-MSC-25707-1  
US-PATENT-APPL-SN-359627  
US-PATENT-CLASS-126-263  
US-PATENT-CLASS-165-48R  
US-PATENT-CLASS-165-61  
US-PATENT-CLASS-165-64  
US-PATENT-CLASS-244-163  
US-PATENT-4,513,810  
NAS 1.71:LAR-13268-1  
NASA-CASE-LAR-13268-1  
US-PATENT-APPL-SN-727034  
NAS 1.71:LAR-12871-1  
NASA-CASE-LAR-12871-1  
US-PATENT-APPL-SN-719797  
NAS 1.71:NPO-16479-1-CU  
NASA-CASE-NPO-16479-1-CU  
US-PATENT-APPL-SN-719794  
NASA-CASE-NPO-16000-1  
US-PATENT-APPL-SN-384547  
US-PATENT-CLASS-250-339  
US-PATENT-CLASS-364-556  
US-PATENT-4,509,130  
NAS 1.71:NPO-16402-1  
NASA-CASE-NPO-16402-1  
US-PATENT-APPL-SN-727931  
NASA-CASE-NPO-15037-2  
US-PATENT-APPL-SN-161257  
US-PATENT-APPL-SN-431420  
US-PATENT-CLASS-415-1  
US-PATENT-CLASS-415-68  
US-PATENT-4,514,137  
NASA-CASE-MSC-18852-1  
US-PATENT-APPL-SN-392094  
US-PATENT-CLASS-239-DIG.23  
US-PATENT-CLASS-239-288  
US-PATENT-CLASS-239-322  
US-PATENT-CLASS-239-327  
US-PATENT-CLASS-239-375  
US-PATENT-CLASS-239-590  
US-PATENT-CLASS-55-DIG.42  
US-PATENT-4,519,545  
NASA-CASE-MSC-20148-1  
US-PATENT-APPL-SN-636465  
US-PATENT-CLASS-251-325  
US-PATENT-CLASS-251-349  
US-PATENT-CLASS-251-353  
US-PATENT-CLASS-277-135  
US-PATENT-CLASS-277-80  
US-PATENT-4,523,741  
NASA-CASE-LAR-13009-1

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N85-29286* #	c 37	NASA-CASE-LAR-13040-1 US-PATENT-APPL-SN-547176 US-PATENT-CLASS-219-201 US-PATENT-CLASS-219-221 US-PATENT-CLASS-219-285 US-PATENT-CLASS-414-217 US-PATENT-CLASS-73-863.11 US-PATENT-CLASS-73-864.81 US-PATENT-4,516,435	N85-30187* #	c 33	NAS 1.71:GSC-12958-1 NASA-CASE-GSC-12958-1 US-PATENT-APPL-SN-727035		US-PATENT-CLASS-29-578 US-PATENT-CLASS-357-4 US-PATENT-CLASS-357-50 US-PATENT-4,522,661	
N85-29287* #	c 37	NAS 1.71:LAR-13198-1 NASA-CASE-LAR-13198-1 US-PATENT-APPL-SN-729704	N85-30201* #	c 33	NAS 1.71:ARC-11536-1 NASA-CASE-ARC-11536-1 US-PATENT-APPL-SN-725714		US-PATENT-CLASS-29-578 US-PATENT-CLASS-357-4 US-PATENT-CLASS-357-50 US-PATENT-4,522,661	
N85-29288* #	c 37	NAS 1.71:MFS-28059-1 NASA-CASE-MFS-28059-1 US-PATENT-APPL-SN-709255	N85-30202* #	c 33	NASA-CASE-GSC-12851-1 US-PATENT-APPL-SN-459842 US-PATENT-CLASS-250-363S US-PATENT-CLASS-250-369 US-PATENT-4,521,688	N85-30281* #	c 35	NASA-CASE-LAR-12966-1 US-PATENT-APPL-SN-414237 US-PATENT-CLASS-356-351 US-PATENT-CLASS-356-358 US-PATENT-CLASS-73-657 US-PATENT-4,512,661
N85-29289* #	c 37	NAS 1.71:MFS-28001-1 NASA-CASE-MFS-28001-1 US-PATENT-APPL-SN-739788	N85-30305* #	c 36	NASA-CASE-NPO-15980-1 US-PATENT-APPL-SN-385220 US-PATENT-CLASS-357-17 US-PATENT-CLASS-357-40 US-PATENT-CLASS-357-46 US-PATENT-CLASS-372-38 US-PATENT-CLASS-372-46 US-PATENT-CLASS-372-50 US-PATENT-4,513,423	N85-30923* #	c 76	NASA-CASE-LAR-12893-1 US-PATENT-APPL-SN-364041 US-PATENT-CLASS-204-1T US-PATENT-CLASS-324-158D US-PATENT-CLASS-324-71.5 US-PATENT-4,511,838
N85-29290* #	c 37	NAS 1.71:MSC-20475-1 NASA-CASE-MSC-20475-1 US-PATENT-APPL-SN-725689	N85-30333* #	c 37	NASA-CASE-LEW-13717-1 US-PATENT-APPL-SN-463456 US-PATENT-CLASS-310-77 US-PATENT-CLASS-310-93 US-PATENT-CLASS-318-611 US-PATENT-CLASS-335-100 US-PATENT-4,517,505	N85-30932* #	c 76	NAS 1.71:MFS-28060-1 NASA-CASE-MFS-28060-1 US-PATENT-APPL-SN-706565
N85-29291* #	c 37	NAS 1.71:NPO-16321-1 NAS 1.71:NPO-16322-1 NASA-CASE-NPO-16321-1 NASA-CASE-NPO-16322-1 US-PATENT-APPL-SN-692802 NASA-CASE-NPO-16147-1-CU US-PATENT-APPL-SN-559988 US-PATENT-CLASS-73-505 US-PATENT-4,520,656	N85-30334* #	c 37	NASA-CASE-MSC-20080-1 US-PATENT-APPL-SN-393584 US-PATENT-CLASS-403-15 US-PATENT-CLASS-403-16 US-PATENT-CLASS-403-322 US-PATENT-CLASS-89-1.57 US-PATENT-4,512,678	N85-30933* #	c 76	NAS 1.71:NPO-15813-2 NASA-CASE-NPO-15813-2 US-PATENT-APPL-SN-706564 US-PATENT-CLASS-324-71.5 US-PATENT-4,511,838
N85-29701* #	c 72	NAS 1.71:NPO-16061-1-CU NASA-CASE-NPO-16061-1-CU US-PATENT-APPL-SN-729768	N85-30335* #	c 37	NASA-CASE-LAR-12738-2 US-PATENT-APPL-SN-539230 US-PATENT-CLASS-244-158-A US-PATENT-CLASS-411-103 US-PATENT-CLASS-411-108 US-PATENT-CLASS-52-127.7 US-PATENT-CLASS-52-506 US-PATENT-CLASS-52-745 US-PATENT-4,520,601	N85-33187* #	c 23	NASA-CASE-ARC-11243-2 US-PATENT-APPL-SN-183707 US-PATENT-CLASS-549-335 US-PATENT-4,528,386
N85-29749* #	c 74	NASA-CASE-NPO-15464-1 US-PATENT-APPL-SN-342828 US-PATENT-CLASS-156-166 US-PATENT-CLASS-350-320 US-PATENT-CLASS-350-96.15 US-PATENT-4,523,810	N85-30336* #	c 37	NASA-CASE-LAR-12864-1 US-PATENT-APPL-SN-387646 US-PATENT-CLASS-403-102 US-PATENT-CLASS-403-322 US-PATENT-CLASS-403-348 US-PATENT-4,518,277	N85-33433* #	c 34	NASA-CASE-LEW-13914-1 US-PATENT-APPL-SN-537615 US-PATENT-CLASS-315-3.5 US-PATENT-CLASS-315-5.38 US-PATENT-CLASS-445-35 US-PATENT-4,527,092
N85-29750* #	c 74	NASA-CASE-MSC-18417-1 US-PATENT-APPL-SN-523559 US-PATENT-CLASS-350-312 US-PATENT-CLASS-350-319 US-PATENT-CLASS-350-321 US-PATENT-CLASS-52-171 US-PATENT-4,521,077	N85-30474* #	c 44	NASA-CASE-NPO-15419-2 US-PATENT-APPL-SN-259208 US-PATENT-APPL-SN-542557 US-PATENT-CLASS-126-DIG.1 US-PATENT-CLASS-126-400 US-PATENT-CLASS-126-415 US-PATENT-CLASS-126-419 US-PATENT-CLASS-126-900 US-PATENT-4,512,332	N85-33489* #	c 37	NASA-CASE-LEW-13506-1 US-PATENT-APPL-SN-596960 US-PATENT-CLASS-384-101 US-PATENT-CLASS-384-99 US-PATENT-4,527,910
N85-29800* #	c 76	NASA-CASE-NPO-15772-1 US-PATENT-APPL-SN-392944 US-PATENT-CLASS-156-623Q US-PATENT-CLASS-23-295R US-PATENT-4,512,846	N85-30475* #	c 44	NASA-CASE-NPO-16155-1 US-PATENT-APPL-SN-578390 US-PATENT-CLASS-136-255 US-PATENT-CLASS-136-256 US-PATENT-CLASS-136-261 US-PATENT-CLASS-357-30 US-PATENT-4,524,237	N85-33701* #	c 60	NASA-CASE-MFS-25319-1 US-PATENT-APPL-SN-437917 US-PATENT-CLASS-364-723 US-PATENT-CLASS-364-853 US-PATENT-4,528,639
N85-29947* #	c 05	NASA-CASE-ARC-11444-1 US-PATENT-APPL-SN-489675 US-PATENT-CLASS-416-145 US-PATENT-CLASS-416-23 US-PATENT-CLASS-416-500 US-PATENT-4,514,143	N85-30618* #	c 52	NASA-CASE-LAR-13028-1 US-PATENT-APPL-SN-582492 US-PATENT-CLASS-128-660 US-PATENT-CLASS-128-736 US-PATENT-CLASS-374-117 US-PATENT-CLASS-374-160 US-PATENT-4,513,750	N85-33826* #	c 76	NASA-CASE-MSC-20036-1 US-PATENT-APPL-SN-569372 US-PATENT-CLASS-204-192C US-PATENT-CLASS-204-192P US-PATENT-CLASS-350-342 US-PATENT-CLASS-428-432 US-PATENT-CLASS-428-698 US-PATENT-CLASS-428-913 US-PATENT-4,522,469
N85-29991* #	c 18	NASA-CASE-MFS-25837-1 US-PATENT-APPL-SN-401282 US-PATENT-CLASS-244-118.1 US-PATENT-CLASS-244-158R US-PATENT-CLASS-248-503 US-PATENT-CLASS-248-555 US-PATENT-CLASS-403-143 US-PATENT-CLASS-403-56 US-PATENT-CLASS-403-76 US-PATENT-CLASS-403-90 US-PATENT-CLASS-410-79 US-PATENT-CLASS-410-90 US-PATENT-4,508,296	N85-30765* #	c 71	NASA-CASE-NPO-155559-1 US-PATENT-APPL-SN-379601 US-PATENT-CLASS-181-0.5 US-PATENT-CLASS-209-422 US-PATENT-CLASS-209-638 US-PATENT-4,523,682	N85-34280* #	c 27	NASA-CASE-ARC-11522-2 US-PATENT-APPL-SN-641143 US-PATENT-CLASS-528-168 US-PATENT-CLASS-528-229 US-PATENT-CLASS-528-352 US-PATENT-CLASS-528-353 US-PATENT-4,536,565
N85-30027* #	c 24	NASA-CASE-LEW-13828-1 US-PATENT-APPL-SN-560035 US-PATENT-CLASS-219-76.14 US-PATENT-CLASS-427-178 US-PATENT-CLASS-427-37 US-PATENT-CLASS-427-422 US-PATENT-4,518,625	N85-30779* #	c 72	NAS 1.71:NPO-16372-1 NASA-CASE-NPO-16372-1 US-PATENT-APPL-SN-703847	N85-34281* #	c 27	NASA-CASE-ARC-11424-1 US-PATENT-APPL-SN-598777 US-PATENT-CLASS-428-260 US-PATENT-CLASS-428-408 US-PATENT-CLASS-428-413 US-PATENT-CLASS-525-107 US-PATENT-CLASS-525-113 US-PATENT-CLASS-525-119 US-PATENT-CLASS-525-186 US-PATENT-CLASS-525-229 US-PATENT-CLASS-528-113 US-PATENT-CLASS-528-117 US-PATENT-CLASS-528-407 US-PATENT-CLASS-528-94 US-PATENT-4,537,834
N85-30033* #	c 24	NAS 1.71:ARC-11538-1-SB NASA-CASE-ARC-11538-1-SB US-PATENT-APPL-SN-719796	N85-30922* #	c 76	NASA-CASE-NPO-15813-1 US-PATENT-APPL-SN-507624	N85-34327* #	c 32	NASA-CASE-LAR-13226-1 US-PATENT-APPL-SN-548583 US-PATENT-CLASS-523-454 US-PATENT-CLASS-523-458 US-PATENT-CLASS-528-106 US-PATENT-CLASS-528-229 US-PATENT-CLASS-528-407 US-PATENT-CLASS-528-92 US-PATENT-4,510,277
N85-30039* #	c 25	NASA-CASE-LEW-13770-6 US-PATENT-APPL-SN-516217 US-PATENT-APPL-SN-561434 US-PATENT-CLASS-526-204 US-PATENT-CLASS-526-217 US-PATENT-CLASS-526-262 US-PATENT-CLASS-528-314					NASA-CASE-NPO-15704-1 US-PATENT-APPL-SN-359382	

			US-PATENT-CLASS-343-17.2-PC				US-PATENT-CLASS-428-682				US-PATENT-CLASS-428-702
			US-PATENT-CLASS-343-5-CM				US-PATENT-4,485,151				US-PATENT-4,560,577
			US-PATENT-CLASS-343-5-W				US-PATENT-4,535,033		N86-19461* #	c 27	NAS 1.71:ARC-11511-2
			US-PATENT-4,509,048				NASA-CASE-NPO-15924-1				NASA-CASE-ARC-11511-2
N85-34333* #	c 33		NASA-CASE-NPO-15896-1		N85-35253* #	c 25	US-PATENT-APPL-SN-528768				US-PATENT-APPL-SN-754362
			US-PATENT-APPL-SN-387647				US-PATENT-CLASS-201-17		N86-19462* #	c 27	NAS 1.71:LAR-13444-1-CU
			US-PATENT-CLASS-364-571				US-PATENT-CLASS-44-1-SR				NASA-CASE-LAR-13444-1-CU
			US-PATENT-CLASS-364-578				US-PATENT-4,511,362		N86-19479* #	c 31	US-PATENT-APPL-SN-734366
			US-PATENT-CLASS-372-32		N85-35267* #	c 26	NASA-CASE-LEW-13923-1				NASA-CASE-LAR-13098-1
			US-PATENT-4,509,132				US-PATENT-APPL-SN-571617				US-PATENT-APPL-SN-530339
N85-34373* #	c 35		NAS 1.71:NPO-15493-2				US-PATENT-CLASS-427-191				US-PATENT-CLASS-16-242
			NAS 1.71:NPO-15494-2				US-PATENT-CLASS-427-228				US-PATENT-CLASS-16-390
			US-PATENT-APPL-SN-563890				US-PATENT-CLASS-427-294				US-PATENT-CLASS-403-171
			US-PATENT-CLASS-324-65-P				US-PATENT-CLASS-427-376.2				US-PATENT-CLASS-403-64
			US-PATENT-CLASS-73-75				US-PATENT-CLASS-427-380				US-PATENT-CLASS-52-632
			US-PATENT-4,532,797				US-PATENT-CLASS-427-397.7				US-PATENT-CLASS-52-637
N85-34374* #	c 35		NASA-CASE-ARC-11503-1				US-PATENT-CLASS-428-698				US-PATENT-CLASS-52-646
			US-PATENT-APPL-SN-582643				US-PATENT-CLASS-428-704				US-PATENT-CLASS-52-648
			US-PATENT-CLASS-250-374				US-PATENT-4,535,035		N86-19515* #	c 33	US-PATENT-4,557,097
			US-PATENT-CLASS-250-379		N86-12547* #	c 34	NASA-CASE-LAR-13220-1				NASA-CASE-GSC-12555-1
			US-PATENT-4,538,066				US-PATENT-APPL-SN-633179				US-PATENT-APPL-SN-153240
N85-34375* #	c 35		NASA-CASE-LAR-13243-1				US-PATENT-CLASS-73-3				US-PATENT-CLASS-331-116-FE
			US-PATENT-APPL-SN-590923				US-PATENT-CLASS-73-861.07				US-PATENT-CLASS-331-117-FE
			US-PATENT-CLASS-73-831				US-PATENT-4,538,446				US-PATENT-4,553,110
			US-PATENT-CLASS-73-856		N86-19304* #	c 04	NASA-CASE-KSC-11155-1		N86-19516* #	c 33	NASA-CASE-NPO-16112-1
			US-PATENT-4,535,836				US-PATENT-APPL-SN-425201				US-PATENT-APPL-SN-542232
N85-34401* #	c 37		NASA-CASE-MFS-25907-1				US-PATENT-CLASS-343-6.8-R				US-PATENT-CLASS-357-23.6
			US-PATENT-APPL-SN-510137				US-PATENT-4,540,986				US-PATENT-CLASS-357-30
			US-PATENT-CLASS-244-118.1		N86-19310* #	c 05	NASA-CASE-LAR-13155-1				US-PATENT-CLASS-357-58
			US-PATENT-CLASS-244-158R				US-PATENT-APPL-SN-469371				US-PATENT-CLASS-357-59
			US-PATENT-CLASS-248-550				US-PATENT-CLASS-244-158-A				US-PATENT-4,531,143
			US-PATENT-CLASS-267-150				US-PATENT-CLASS-244-158-R		N86-19517* #	c 33	NAS 1.71:NPO-16397-1-CU
			US-PATENT-CLASS-267-8R				US-PATENT-CLASS-244-172				NASA-CASE-NPO-16397-1-CU
			US-PATENT-CLASS-410-156				US-PATENT-4,557,444		N86-19580* #	c 35	US-PATENT-APPL-SN-751643
			US-PATENT-4,536,114		N86-19344* #	c 18	NAS 1.71:MSC-20906-1				NASA-CASE-GSC-12795-1
N85-34402* #	c 37		NASA-CASE-LEW-14053-1				NASA-CASE-MSC-20906-1				US-PATENT-APPL-SN-462508
			US-PATENT-APPL-SN-602050				US-PATENT-APPL-SN-779742				US-PATENT-CLASS-374-115
			US-PATENT-CLASS-415-170-R		N86-19376* #	c 23	NASA-CASE-ARC-11428-1				US-PATENT-CLASS-374-120
			US-PATENT-CLASS-415-174				US-PATENT-APPL-SN-498126				US-PATENT-CLASS-374-163
			US-PATENT-CLASS-415-196				US-PATENT-CLASS-260-927-N				US-PATENT-4,556,327
			US-PATENT-CLASS-415-200				US-PATENT-CLASS-428-410		N86-19581* #	c 35	NASA-CASE-MSC-20250-1
			US-PATENT-CLASS-416-174				US-PATENT-CLASS-528-310				US-PATENT-APPL-SN-491113
			US-PATENT-4,540,336				US-PATENT-CLASS-548-413				US-PATENT-CLASS-73-862.01
N85-34403* #	c 37		NASA-CASE-MSC-20127-2				US-PATENT-CLASS-564-113				US-PATENT-CLASS-73-862.54
			US-PATENT-APPL-SN-646044				US-PATENT-4,550,177				US-PATENT-4,557,149
			US-PATENT-CLASS-137-116.3		N86-19380* #	c 24	NASA-CASE-ARC-11427-1		N86-19603* #	c 37	NASA-CASE-MFS-25948-1
			US-PATENT-CLASS-137-99				US-PATENT-APPL-SN-493865				US-PATENT-APPL-SN-538063
			US-PATENT-4,509,548				US-PATENT-CLASS-523-433				US-PATENT-CLASS-414-730
N85-34441* #	c 44		NASA-CASE-LEW-14077-1				US-PATENT-CLASS-523-445				US-PATENT-CLASS-901-31
			US-PATENT-APPL-SN-580573				US-PATENT-CLASS-523-66468				US-PATENT-CLASS-901-50
			US-PATENT-CLASS-136-253				US-PATENT-CLASS-525-423				US-PATENT-4,545,723
			US-PATENT-4,528,417				US-PATENT-CLASS-525-527		N86-19604* #	c 37	NASA-CASE-NPO-15980-1
N85-34629* #	c 74		NASA-CASE-NPO-15865-1				US-PATENT-CLASS-528-102				US-PATENT-APPL-SN-527613
			US-PATENT-APPL-SN-425202				US-PATENT-CLASS-528-103				US-PATENT-CLASS-337-140
			US-PATENT-CLASS-343-13-R				US-PATENT-4,550,129				US-PATENT-CLASS-60-527
			US-PATENT-CLASS-356-5		N86-19413* #	c 25	NASA-CASE-MSC-20622-1				US-PATENT-CLASS-60-528
			US-PATENT-4,533,242				US-PATENT-APPL-SN-571616				US-PATENT-4,553,393
N85-34722* #	c 85		NASA-CASE-NPO-15949-1				US-PATENT-CLASS-374-46		N86-19605* #	c 37	NASA-CASE-NPO-16038-1
			US-PATENT-APPL-SN-457990				US-PATENT-CLASS-374-8				US-PATENT-APPL-SN-469864
			US-PATENT-CLASS-414-288				US-PATENT-CLASS-422-78				US-PATENT-CLASS-16-294
			US-PATENT-CLASS-414-328				US-PATENT-CLASS-436-155				US-PATENT-CLASS-403-113
			US-PATENT-CLASS-414-373				US-PATENT-CLASS-73-7				US-PATENT-CLASS-403-120
			US-PATENT-CLASS-414-786				US-PATENT-4,561,784				US-PATENT-4,558,967
			US-PATENT-4,537,554		N86-19455* #	c 27	NASA-CASE-ARC-11405-2		N86-19606* #	c 37	NASA-CASE-LEW-13670-1
N85-35194* #	c 07		NASA-CASE-LAR-13019-1				US-PATENT-APPL-SN-514117				US-PATENT-APPL-SN-603374
			US-PATENT-APPL-SN-576308				US-PATENT-CLASS-260-245.75				US-PATENT-CLASS-384-103
			US-PATENT-CLASS-244-199				US-PATENT-CLASS-260-245.9				US-PATENT-CLASS-384-106
			US-PATENT-CLASS-244-55				US-PATENT-CLASS-528-327				US-PATENT-4,552,466
			US-PATENT-4,533,101				US-PATENT-4,522,755		N86-19610* #	c 37	NAS 1.71:NPO-16423-1-CU
N85-35195* #	c 07		NASA-CASE-LEW-13562-2				NASA-CASE-LAR-13135-1				NASA-CASE-NPO-16423-1-CU
			US-PATENT-APPL-SN-500651				US-PATENT-APPL-SN-649328				US-PATENT-APPL-SN-765978
			US-PATENT-CLASS-239-402.5				US-PATENT-CLASS-525-432		N86-19611* #	c 37	NAS 1.71:MFS-28058-1
			US-PATENT-CLASS-60-39.23				US-PATENT-CLASS-525-436				NASA-CASE-MFS-28058-1
			US-PATENT-CLASS-60-748				US-PATENT-CLASS-528-179				US-PATENT-APPL-SN-751691
			US-PATENT-4,534,166				US-PATENT-CLASS-528-182		N86-19612* #	c 37	NAS 1.71:MSC-20549-1
N85-35200* #	c 08		NASA-CASE-LAR-13076-1				US-PATENT-CLASS-528-185				NASA-CASE-MSC-20549-1
			US-PATENT-APPL-SN-532342				US-PATENT-CLASS-528-352				US-PATENT-APPL-SN-790596
			US-PATENT-CLASS-244-113				US-PATENT-CLASS-528-353		N86-19613* #	c 37	NAS 1.71:MSC-20910-1
			US-PATENT-CLASS-244-139				US-PATENT-4,552,931				NASA-CASE-MSC-20910-1
			US-PATENT-CLASS-244-75-R				NASA-CASE-LEW-13864-1				US-PATENT-APPL-SN-783888
			US-PATENT-4,538,778		N86-19457* #	c 27	US-PATENT-APPL-SN-434087		N86-19614* #	c 37	NAS 1.71:MSC-20979-1
N85-35227* #	c 23		NASA-CASE-NPO-16203-1				US-PATENT-CLASS-528-229				NASA-CASE-MSC-20979-1
			US-PATENT-APPL-SN-493179				US-PATENT-CLASS-528-322				US-PATENT-APPL-SN-796053
			US-PATENT-CLASS-435-160				US-PATENT-CLASS-528-342		N86-19711* #	c 43	NASA-CASE-NPO-15939-1
			US-PATENT-CLASS-435-842				US-PATENT-CLASS-528345				US-PATENT-APPL-SN-465365
			US-PATENT-4,539,293				US-PATENT-4,560,742				US-PATENT-CLASS-343-5-CD
N85-35233* #	c 24		NASA-CASE-LEW-14057-1		N86-19458* #	c 27	NASA-CASE-LEW-14072-1				US-PATENT-CLASS-343-5-VQ
			US-PATENT-APPL-SN-375784				US-PATENT-APPL-SN-649330				US-PATENT-CLASS-367-88
			US-PATENT-APPL-SN-523297				US-PATENT-CLASS-204-192-C				US-PATENT-4,551,724
			US-PATENT-APPL-SN-640712				US-PATENT-CLASS-204-192-D				
			US-PATENT-CLASS-428-633				US-PATENT-CLASS-204-192-R		N86-19721* #	c 44	NASA-CASE-LEW-14028-1
			US-PATENT-CLASS-428-656				US-PATENT-CLASS-204-298				US-PATENT-APPL-SN-642310
			US-PATENT-CLASS-428-678				US-PATENT-CLASS-427-248.1				US-PATENT-CLASS-429-109
			US-PATENT-CLASS-428-679				US-PATENT-CLASS-427-38				US-PATENT-CLASS-429-15
			US-PATENT-CLASS-428-680				US-PATENT-CLASS-428-446				US-PATENT-CLASS-429-19
			US-PATENT-CLASS-428-681				US-PATENT-CLASS-428-473.5				US-PATENT-CLASS-429-51

		US-PATENT-4,543,302	N86-20566* #	c 27	NAS 1.71: LAR-13354-1	NASA-CASE-NPO-16497-1-CU
N86-19885* #	c 52	NAS 1.71: GSC-12944-1			NASA-CASE-LAR-13354-1	US-PATENT-APPL-SN-783887
		NASA-CASE-GSC-12944-1	N86-20587* #	c 31	US-PATENT-APPL-SN-746901	NAS 1.71: NPO-16542-1-CU
		US-PATENT-APPL-SN-793006			NAS 1.71: LEW-13899-1	NASA-CASE-NPO-16542-1-CU
N86-20086* #	c 71	NAS 1.71: LAR-13111-1-CU			NASA-CASE-LEW-13899-1	US-PATENT-APPL-SN-781812
		NASA-CASE-LAR-13111-1-CU	N86-20647* #	c 32	US-PATENT-APPL-SN-775968	NASA-CASE-MFS-25842-2
		US-PATENT-APPL-SN-751695			NASA-CASE-MFS-25750-1	US-PATENT-APPL-SN-692875
N86-20087* #	c 71	NAS 1.71: NPO-16675-1-CU			US-PATENT-APPL-SN-530-185	US-PATENT-CLASS-277-53
		NASA-CASE-NPO-16675-1-CU			US-PATENT-CLASS-250-225	US-PATENT-CLASS-415-174
		US-PATENT-APPL-SN-789266			US-PATENT-CLASS-350-354	US-PATENT-4,545,586
N86-20124* #	c 74	NASA-CASE-MFS-25942-1	N86-20668* #	c 33	US-PATENT-CLASS-358-168	N86-20789* #
		US-PATENT-APPL-SN-571613			US-PATENT-4,546,248	c 37
		US-PATENT-CLASS-378-43			NASA-CASE-GSC-12804-1	US-PATENT-APPL-SN-537757
		US-PATENT-CLASS-378-85			US-PATENT-APPL-SN-529803	US-PATENT-CLASS-212-230
		US-PATENT-4,562,583			US-PATENT-CLASS-331-1-A	US-PATENT-CLASS-414-4
N86-20125* #	c 74	NASA-CASE-ARC-11502-1			US-PATENT-CLASS-331-2	US-PATENT-CLASS-414-718
		US-PATENT-APPL-SN-594134	N86-20669* #	c 33	US-PATENT-4,550,292	US-PATENT-CLASS-414-753
		US-PATENT-CLASS-350-276-R			NASA-CASE-GSC-12899-1	US-PATENT-CLASS-901-25
		US-PATENT-CLASS-350-319			US-PATENT-APPL-SN-613140	US-PATENT-4,547,121
		US-PATENT-CLASS-350-448			US-PATENT-CLASS-191-122-R	N86-20797* #
		US-PATENT-CLASS-350-537			US-PATENT-CLASS-242-107	c 37
		US-PATENT-CLASS-350-580			US-PATENT-CLASS-242-54-R	NASA-CASE-ARC-11349-1
		US-PATENT-4,542,963			US-PATENT-4,542,858	US-PATENT-APPL-SN-746160
N86-20126* #	c 74	NASA-CASE-MSC-20418-1	N86-20670* #	c 33	NASA-CASE-MFS-25868-1	N86-20800* #
		US-PATENT-APPL-SN-438446			US-PATENT-APPL-SN-638584	c 37
		US-PATENT-CLASS-378-58			US-PATENT-CLASS-330-258	NASA-CASE-LAR-13259-1
		US-PATENT-CLASS-378-59			US-PATENT-CLASS-330-261	US-PATENT-APPL-SN-754706
		US-PATENT-4,542,520			US-PATENT-CLASS-330-311	NAS 1.71: NPO-16233-1
N86-20128* #	c 74	NAS 1.71: ARC-11611-1			US-PATENT-4,551,687	NASA-CASE-NPO-16233-1
		NASA-CASE-ARC-11611-1	N86-20671* #	c 33	NASA-CASE-LEW-13773-2	US-PATENT-APPL-SN-737018
		US-PATENT-APPL-SN-765981			US-PATENT-APPL-SN-638541	N86-20803* #
N86-20129* #	c 74	NAS 1.71: NPO-16558-1-CU			US-PATENT-CLASS-244-134-D	c 37
		NASA-CASE-NPO-16558-1-CU			US-PATENT-CLASS-310-324	NASA-CASE-MSC-20162-1
		US-PATENT-APPL-SN-779744			US-PATENT-CLASS-39-25.35	US-PATENT-APPL-SN-764805
N86-20130* #	c 74	NAS 1.71: MFS-29134-1			US-PATENT-4,545,553	N86-20804* #
		NASA-CASE-MFS-29134-1	N86-20672* #	c 33	NASA-CASE-LEW-13922-1	c 37
		US-PATENT-APPL-SN-783890			US-PATENT-APPL-SN-537614	NASA-CASE-GSC-12957-1
N86-20150* #	c 76	NASA-CASE-GSC-12816-1			US-PATENT-CLASS-307-264	US-PATENT-APPL-SN-800193
		US-PATENT-APPL-SN-507625			US-PATENT-CLASS-307-270	N86-20805* #
		US-PATENT-CLASS-136-255			US-PATENT-CLASS-307-566	c 37
		US-PATENT-CLASS-136-262			US-PATENT-CLASS-307-570	NASA-CASE-MSC-20857-1
		US-PATENT-CLASS-29-572			US-PATENT-CLASS-307-572	US-PATENT-APPL-SN-783886
		US-PATENT-CLASS-357-15			US-PATENT-4,547,686	N86-20806* #
		US-PATENT-CLASS-357-30	N86-20673* #	c 33	NAS 1.71: NPO-15977-1-CU	c 37
		US-PATENT-4,543,442			NASA-CASE-NPO-15977-1-CU	NASA-CASE-MSC-20797-1
N86-20389* #	c 07	NASA-CASE-LEW-13142-2			US-PATENT-APPL-SN-692740	US-PATENT-APPL-SN-771537
		US-CLASS-60-39.07	N86-20679* #	c 33	NAS 1.71: GSC-12961-1	N86-20807* #
		US-PATENT-APPL-SN-413101			NASA-CASE-GSC-12961-1	c 37
		US-PATENT-CLASS-60-39.02			US-PATENT-APPL-SN-754707	NASA-CASE-MSC-20857-1
		US-PATENT-CLASS-60-736	N86-20680* #	c 33	NAS 1.71: LEW-14127-1	US-PATENT-APPL-SN-783886
		US-PATENT-4,550,561			NASA-CASE-LEW-14127-1	N86-20841* #
N86-20396* #	c 08	NAS 1.71: GSC-12970-1			US-PATENT-APPL-SN-748536	c 39
		NASA-CASE-GSC-12970-1			NAS 1.71: NPO-16420-1	US-PATENT-APPL-SN-548582
		US-PATENT-APPL-SN-795805	N86-20681* #	c 33	NASA-CASE-NPO-16420-1	US-PATENT-CLASS-73-150-A
N86-20397* #	c 08	NAS 1.71: LAR-13280-1			US-PATENT-APPL-SN-727838	US-PATENT-CLASS-73-827
		NASA-CASE-LAR-13280-1	N86-20682* #	c 33	NAS 1.71: MFS-28080-1	US-PATENT-4,548,083
		US-PATENT-APPL-SN-790556			NASA-CASE-MFS-28080-1	N86-21147* #
N86-20466* #	c 17	NAS 1.71: MSC-20821-1			US-PATENT-APPL-SN-775588	c 54
		NASA-CASE-MSC-20821-1	N86-20721* #	c 34	NAS 1.71: MSC-20841-1	NAS 1.71: LAR-13393-1
		US-PATENT-APPL-SN-775990			NASA-CASE-MSC-20841-1	NASA-CASE-LAR-13393-1
N86-20469* #	c 18	NASA-CASE-MFS-25429-1			US-PATENT-APPL-SN-755288	US-PATENT-APPL-SN-760799
		US-PATENT-APPL-SN-596959	N86-20750* #	c 35	NASA-CASE-MFS-25963-1	N86-21154* #
		US-PATENT-CLASS-124-56			US-PATENT-APPL-SN-571614	c 60
		US-PATENT-CLASS-244-158-R			US-PATENT-CLASS-165-30	NASA-CASE-LAR-12968-1
		US-PATENT-CLASS-403-328			US-PATENT-CLASS-165-61	US-PATENT-APPL-SN-523560
		US-PATENT-4,554,905			US-PATENT-CLASS-165-65	US-PATENT-CLASS-364-728
N86-20471* #	c 18	NAS 1.71: MSC-20921-1			US-PATENT-CLASS-219-390	US-PATENT-4,545,025
		NASA-CASE-MSC-20921-1			US-PATENT-CLASS-219-395	N86-21276* #
		US-PATENT-APPL-SN-746162			US-PATENT-CLASS-219-396	c 71
N86-20499* #	c 23	NAS 1.71: ARC-11425-2			US-PATENT-CLASS-432-18	NASA-CASE-LAR-13153-1
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 US-PATENT-APPL-SN-867986

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The NASA Patent Counsel having cognizance of the invention is determined by the first three letters or prefix of the NASA Case Number assigned to the invention. The addresses of NASA Patent Counsels are listed alongside the NASA Case Number prefix letters in the following table.

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# PATENT LICENSING REGULATIONS

## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

### 14 CFR Part 1245

#### Licensing of NASA Inventions

**AGENCY:** National Aeronautics and Space Administration.

**ACTION:** Interim regulation with comments requested.

**SUMMARY:** The National Aeronautics and Space Administration (NASA) is revising its patent licensing regulations to conform with Pub. L. 96-517. This interim regulation provides policies and procedures applicable to the licensing of federally owned inventions in the custody of the National Aeronautics and Space Administration, and implements Pub. L. 96-517. The object of this subpart is to use the patent system to promote the utilization of inventions arising from NASA supported research and development.

**EFFECTIVE DATE:** July 1, 1981. Comments must be received in writing by December 2, 1981. Unless a notice is published in the *Federal Register* after the comment period indicating changes to be made, this interim regulation shall become a final regulation.

**ADDRESS:** Mr. John G. Mannix, Director of Patent Licensing, GP-4, NASA, Washington, D.C. 20546.

**FOR FURTHER INFORMATION CONTACT:** Mr. John G. Mannix, (202) 755-3954.

#### SUPPLEMENTARY INFORMATION:

### PART 1245—PATENTS AND OTHER INTELLECTUAL PROPERTY RIGHTS

Subpart 2 of Part 1245 is revised to read as follows

#### Subpart 2—Licensing of NASA Inventions

##### Sec.

- 1245.200 Scope of subpart.
- 1245.201 Policy and objective.
- 1245.202 Definitions.
- 1245.203 Authority to grant licenses.

#### Restrictions and Conditions

- 1245.204 All licenses granted under this subpart.

#### Types of Licenses

- 1245.205 Nonexclusive licenses.
- 1245.206 Exclusive and partially exclusive licenses.

#### Procedures

- 1245.207 Application for a license.
- 1245.208 Processing applications.
- 1245.209 Notice to Attorney General.

- 1245.210 Modification and termination of licenses.

- 1245.211 Appeals.

- 1245.212 Protection and administration of inventions.

- 1245.213 Transfer of custody.

- 1245.214 Confidentiality of information.

Authority: 35 U.S.C. Section 207 and 208, 64 Stat. 3023 and 3024.

#### Subpart 2—Licensing of NASA Inventions

##### § 1245.200 Scope of subpart.

This subpart prescribes the terms, conditions, and procedures upon which a NASA invention may be licensed. It does not affect licenses which (a) were in effect prior to July 1, 1981; (b) may exist at the time of the Government's acquisition of title to the invention, including those resulting from the allocation of rights to inventions made under Government research and development contracts; (c) are the result of an authorized exchange of rights in the settlement of patent disputes; or (d) are otherwise authorized by law or treaty.

##### § 1245.201 Policy and objective.

It is the policy and objective of this subpart to use the patent system to promote the utilization of inventions arising from NASA supported research and development.

##### § 1245.202 Definitions.

(a) "Federally owned invention" means an invention, plant, or design which is covered by a patent, or patent application in the United States, or a patent, patent application, plant variety protection, or other form of protection, in a foreign country, title to which has been assigned to or otherwise vested in the United States Government.

(b) "Federal agency" means an executive department, military department, Government corporation, or independent establishment, except the Tennessee Valley Authority, which has custody of a Federally owned invention.

(c) "NASA Invention" means a Federally owned invention with respect to which NASA maintains custody and administration, in whole or in part, of the right, title or interest in such invention on behalf of the United States Government.

(d) "Small business firm" means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of these regulations, the size standard for small business concerns involved in Government procurement, contained in

13 CFR 121.3-8, and in subcontracting, contained in 13 CFR 121.3-12, will be used.

(e) "Practical application" means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are to the extent permitted by law or Government regulations available to the public on reasonable terms.

(f) "United States" means the United States of America, its territories and possessions, the District of Columbia, and the Commonwealth of Puerto Rico.

##### § 1245.203 Authority to grant licenses.

NASA inventions shall be made available for licensing as deemed appropriate in the public interest. NASA may grant nonexclusive, partially exclusive, or exclusive licenses thereto under this subpart on inventions in its custody.

#### Restrictions and Conditions

##### § 1245.204 All licenses granted under this subpart.

(a) *Restrictions.* (1) A license may be granted only if the applicant has supplied NASA with a satisfactory plan for development or marketing of the invention, or both, and with information about the applicant's capability to fulfill the plan.

(2) A license granting rights to use or sell under a NASA invention in the United States shall normally be granted only to a licensee who agrees that any products embodying the invention or produced through the use of the invention will be manufactured substantially in the United States.

(b) *Conditions.* Licenses shall contain such terms and conditions as NASA determines are appropriate for the protection of the interests of the Federal Government and the public and are not in conflict with law or this subpart. The following terms and conditions apply to any license:

(1) The duration of the license shall be for a period specified in the license agreement, unless sooner terminated in accordance with this subpart.

(2) The license may be granted for all or less than all fields of use of the invention or in specified geographical areas, or both.

(3) The license may extend to subsidiaries of the licensee or other parties if provided for in the license but shall be nonassignable without approval of NASA, except to the successor of that part of the licensee's business to which the invention pertains.

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(4) The license may provide the licensee the right to grant sublicenses under the license, subject to the approval of NASA. Each sublicense shall make reference to the license, including the rights retained by the Government, and a copy of such sublicense shall be furnished to NASA.

(5) The license shall require the licensee to carry out the plan for development or marketing of the invention, or both, to bring the invention to practical application within a period specified in the license, and to continue to make the benefits of the invention reasonably accessible to the public.

(6) The license shall require the licensee to report periodically on the utilization or efforts at obtaining utilization that are being made by the licensee, with particular reference to the plan submitted.

(7) All licenses shall normally require royalties or other consideration.

(8) Where an agreement is obtained pursuant to § 1245.204(a)(2) that any products embodying the invention or produced through use of the invention will be manufactured substantially in the United States, the license shall recite such agreement.

(9) The license shall provide for the right of NASA to terminate the license, in whole or in part, if:

(i) NASA determines that the licensee is not executing the plan submitted with its request for a license and the licensee cannot otherwise demonstrate to the satisfaction of NASA that it has taken or can be expected to take within a reasonable time effective steps to achieve practical application of the invention;

(ii) NASA determines that such action is necessary to meet requirements for public use specified by Federal regulations issued after the date of the license and such requirements are not reasonably satisfied by the licensee;

(iii) The licensee has willfully made a false statement of or willfully omitted a material fact in the license application or in any report required by the license agreement; or

(iv) The licensee commits a substantial breach of a covenant or agreement contained in the license.

(10) The license may be modified or terminated, consistent with this subpart, upon mutual agreement of NASA and the licensee.

(11) Nothing relating to the grant of a license, nor the grant itself, shall be construed to confer upon any person any immunity from or defenses under the antitrust laws or from a charge of

patent misuse, and the acquisition and use of rights pursuant to this subpart shall not be immunized from the operation of state or Federal law by reason of the source of the grant.

## Types of Licenses

### § 1245.205 Nonexclusive licenses.

#### (a) Availability of licenses.

Nonexclusive licenses may be granted under NASA inventions without publication of availability or notice of a prospective license.

(b) *Conditions.* In addition to the provisions of § 1245.204, the nonexclusive license may also provide that, after termination of a period specified in the license agreement, NASA may restrict the license to the fields of use or geographic areas, or both, in which the licensee has brought the invention to practical application and continues to make the benefits of the invention reasonably accessible to the public. However, such restriction shall be made only in order to grant an exclusive or partially exclusive license in accordance with this subpart.

### § 1245.206 Exclusive and partially exclusive licenses.

#### (a) Domestic licenses.

(1) *Availability of licenses.* Exclusive or partially exclusive licenses may be granted on NASA inventions: (i) 3 months after notice of the invention's availability has been announced in the *Federal Register*; or (ii) without such notice where NASA determines that expeditious granting of such a license will best serve the interests of the Federal Government and the public; and (iii) in either situation, specified in (a)(1)(i) or (ii) of this section only if:

(A) Notice of a prospective license, identifying the invention and the prospective licensee, has been published in the *Federal Register*, providing opportunity for filing written objections within a 60-day period;

(B) After expiration of the period in § 1245.206(a)(1)(iii)(A) and consideration of any written objections received during the period, NASA has determined that:

(1) The interests of the Federal Government and the public will best be served by the proposed license, in view of the applicant's intentions, plans, and ability to bring the invention to practical application or otherwise promote the invention's utilization by the public;

(2) The desired practical application has not been achieved, or is not likely expeditiously to be achieved, under any nonexclusive license which has been granted, or which may be granted, on the invention;

(3) Exclusive or partially exclusive licensing is a reasonable and necessary incentive to call forth the investment of risk capital and expenditures to bring the invention to practical application or otherwise promote the invention's utilization by the public; and

(4) The proposed terms and scope of exclusivity are not greater than reasonably necessary to provide the incentive for bringing the invention to practical application or otherwise promote the invention's utilization by the public;

(C) NASA has not determined that the grant of such license will tend substantially to lessen competition or result in undue concentration in any section of the country in any line of commerce to which the technology to be licensed relates, or to create or maintain other situations inconsistent with the antitrust laws; and

(D) NASA has given first preference to any small business firms submitting plans that are determined by the agency to be within the capabilities of the firms and as equally likely, if executed, to bring the invention to practical application as any plans submitted by applicants that are not small business firms.

(2) *Conditions.* In addition to the provisions of § 1245.204, the following terms and conditions apply to domestic exclusive and partially exclusive licenses:

(i) The license shall be subject to the irrevocable, royalty-free right of the Government of the United States to practice and have practiced the invention on behalf of the United States and on behalf of any foreign government or international organization pursuant to any existing or future treaty or agreement with the United States.

(ii) The license shall reserve to NASA the right to require the licensee to grant sublicenses to responsible applicants, on reasonable terms, when necessary to fulfill health or safety needs.

(iii) The license shall be subject to any licenses in force at the time of the grant of the exclusive or partially exclusive license.

(iv) The license may grant the licensee the right of enforcement of the licensed patent pursuant to the provisions of Chapter 29 of Title 35, United States Code, or other statutes, as determined appropriate in the public interest.

#### (b) Foreign licenses.

(1) *Availability of licenses.* Exclusive or partially exclusive licenses may be granted on a NASA invention covered by a foreign patent, patent application, or other form of protection, provided that:

(i) Notice of a prospective license,



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identifying the invention and prospective licensee, has been published in the Federal Register, providing opportunity for filing written objections within a 60-day period and following consideration of such objections;

(ii) NASA has considered whether the interests of the Federal Government or United States industry in foreign commerce will be enhanced; and

(iii) NASA has not determined that the grant of such license will tend substantially to lessen competition or result in undue concentration in any section of the United States in any line of commerce to which the technology to be licensed relates, or to create or maintain other situations inconsistent with antitrust laws.

(2) *Conditions.* In addition to the provisions of § 1245.204, the following terms and conditions apply to foreign exclusive and partially exclusive licenses:

(i) The license shall be subject to the irrevocable, royalty-free right of the Government of the United States to practice and have practiced the invention on behalf of the United States and on behalf of any foreign government or international organization pursuant to any existing or future treaty or agreement with the United States.

(ii) The license shall be subject to any licenses in force at the time of the grant of the exclusive or partially exclusive license.

(iii) The license may grant the licensee the right to take any suitable and necessary actions to protect the licensed property, on behalf of the Federal Government.

(c) *Record of determinations.* NASA shall maintain a record of determinations to grant exclusive or partially exclusive licenses.

### Procedures

#### § 1245.207 Application for a license.

An application for a license should be addressed to the Patent Counsel at the NASA installation having responsibility for the invention and shall normally include:

(a) Identification of the invention for which the license is desired, including the patent application serial number or patent number, title, and date, if known;

(b) Identification of the type of license for which the application is submitted;

(c) Name and address of the person, company, or organization applying for the license and the citizenship or place of incorporation of the applicant;

(d) Name, address, and telephone number of representative of applicant to whom correspondence should be sent;

(e) Nature and type of applicant's

business, identifying products or services which the applicant has successfully commercialized, and approximate number of applicant's employees;

(f) Source of information concerning the availability of a license on the invention;

(g) A statement indicating whether applicant is a small business firm as defined in § 1245.202(c);

(h) A detailed description of applicant's plan for development or marketing of the invention, or both, which should include:

(1) A statement of the time, nature and amount of anticipated investment of capital and other resources which applicant believes will be required to bring the invention to practical application;

(2) A statement as to applicant's capability and intention to fulfill the plan, including information regarding manufacturing, marketing, financial, and technical resources;

(3) A statement of the fields of use for which applicant intends to practice the invention; and

(4) A statement of the geographic areas in which applicant intends to manufacture any products embodying the invention and geographic areas where applicant intends to use or sell the invention, or both;

(i) Identification of licenses previously granted to applicant under Federally owned inventions;

(j) A statement containing applicant's best knowledge of the extent to which the invention is being practiced by private industry or Government, or both, or is otherwise available commercially; and

(k) Any other information which applicant believes will support a determination to grant the license to applicant.

#### § 1245.208 Processing applications.

(a) Applications for licenses will be initially reviewed by the Patent Counsel of the NASA installation having responsibility for the invention. The Patent Counsel shall make a preliminary recommendation to the Director of Licensing, NASA Headquarters, whether to: (1) grant the license as requested, (2) grant the license with modification after negotiation with the licensee, or (3) deny the license. The Director of Licensing shall review the preliminary recommendation of the Patent Counsel and make a final recommendation to the NASA Assistant General Counsel for Patent Matters. Such review and final recommendation may include, and be based on, any additional information obtained from applicant and other sources that the Patent Counsel and the

Director of Licensing deem relevant to the license requested. The determination to grant or deny the license shall be made by the Assistant General Counsel for Patent Matters based on the final recommendation of the Director of Licensing.

(b) When notice of a prospective exclusive or partially exclusive license is published in the Federal Register in accordance with § 1245.206(a)(1)(iii)(A) or § 1245.206(b)(1)(i), any written objections received in response thereto will be considered by the Director of Licensing in making the final recommendation to the Assistant General Counsel for Patent Matters.

(c) If the requested license, including any negotiated modifications, is denied by the Assistant General Counsel for Patent Matters, the applicant may request reconsideration by filing a written request for reconsideration within 30 days after receiving notice of denial. This 30-day period may be extended for good cause.

(d) In addition to, or in lieu of requesting reconsideration, the applicant may also appeal the denial of the license in accordance with § 1245.211.

#### § 1245.209 Notice to Attorney General.

A copy of the notice provided for in §§ 1245.206(a)(1)(iii)(A), and 1245.206(b)(1)(i) will be sent to the Attorney General.

#### § 1245.210 Modification and termination of licenses.

Before modifying or terminating a license, other than by mutual agreement, NASA shall furnish the licensee and any sublicensee of record a written notice of intention to modify or terminate the license, and the licensee and any sublicensee shall be allowed 30 days after such notice to remedy any breach of the license or show cause why the license should not be modified or terminated.

#### § 1245.211 Appeals.

(a) The following parties may appeal to the NASA Administrator or designee any decision or determination concerning the grant, denial, interpretation, modification, or termination of a license:

(1) A person whose application for a license has been denied;

(2) A licensee whose license has been modified or terminated, in whole or in part; or

(3) A person who timely filed a written objection in response to the notice required by § 1245.206(a)(1)(iii)(A) or

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1245.208(b)(1)(i) and who can demonstrate to the satisfaction of NASA that such person may be damaged by the Agency action.

(b) Written notice of appeal must be filed within 30 days (or such other time as may be authorized for good cause shown) after receiving notice of the adverse decision or determination; including, an adverse decision following the request for reconsideration under § 1245.208(c). The notice of appeal, along with all supporting documentation should be addressed to the Administrator, National Aeronautics and Space Administration, Washington, DC 20546. Should the appeal raise a genuine dispute over material facts, fact-finding will be conducted by the NASA Inventions and Contributions Board. The person filing the appeal shall be afforded an opportunity to be heard and to offer evidence in support of the appeal. The Chairperson of the Inventions and Contributions Board shall prepare written findings of fact and transmit them to the Administrator

or designee. The decision on the appeal shall be made by the NASA Administrator or designee. There is no further right of administrative appeal from the decision of the Administrator or designee.

### **§ 1245.212 Protection and administration of inventions.**

NASA may take any suitable and necessary steps to protect and administer rights to NASA inventions, either directly or through contract.

### **§ 1245.213 Transfer of custody.**

NASA having custody of certain Federally owned inventions may transfer custody and administration in whole or in part, to another Federal agency, of the right, title, or interest in any such invention.

### **§ 1245.214 Confidentiality of information.**

Title 35, United States Code, section 209, provides that any plan submitted pursuant to § 1245.207(h) and any report required by § 1245.204(b)(6) may be treated by NASA as commercial and

financial information obtained from a person and privileged and confidential and not subject to disclosure under section 552 of Title 5 of the United States Code.

**James M. Boggs,**

*Administrator.*

October 15, 1981.

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